

MARINE REVIEW.

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No. 4.

Ore Sales and Freight Contracts.

When it became known a few days ago that a large portion of next season's output of Bessemer ore had been sold, and that several big contracts for lake transportation from Ashland and Two Harbors had been made at \$1.25, it was generally expected that the vessel owners, notwithstanding the hope entertained by them of securing a rate of \$1.30 or possibly \$1.35 from the head of Lake Superior, would take advantage of the \$1.25 rate, in which there was a certainty of profit, and accept contracts for the great bulk of their tonnage. It is somewhat surprising, however, in some quarters, that while the amount of tonnage covered, including the boats of the ore companies, is large, the individual vessel owners in Cleveland have in several important cases refused to accept the \$1.25 rate. With the McDougall barges and the boats of the Minnesota Steamship Company included, the aggregate of ore covered by lake freight is thought to be about 1,500,000 tons. Aside from the amount to be carried by these boats controlled by the iron ore companies, however, it can not be learned that more than 500,000 to 600,000 tons has been placed, and this would include 120,000 tons going to the Detroit vessel owners as well as a smaller amount said to have been taken by the Northern Steamship Company. Vessel owners could at this writing find shippers ready to take some more tonnage at \$1.25, and probably grant some slight concession in the matter of time for delivery during the season, but such of them as are holding off figure that at an outside estimate the boats having connections with iron ore companies can not carry more than 3,000,000 tons during the season, and there is yet a very large portion of the output to be provided for if 7,000,000 tons, or about that amount, is to be brought to Lake Erie ports by lake. A big demand for coal, low water as predicted by Gen. Poe and other conditions are taken into account in this conclusion. As far as can be learned, nothing has been done in contracts for either Marquette or Escanaba ore. It is the general opinion that Escanaba will open at \$1, but there is some uncertainty regarding Marquette, and a disposition to hold off for a rate proportionately higher than during previous seasons, on account of a light coal supply going to that port.

On the other hand there is nothing in prices governing ore sales so far made to warrant anything more than the rate already paid from the head of Lake Superior. The increase in prices over those of last year is 25 to 40 cents, and this is barely enough to cover the lake freight. A determination on the part of vessel owners to refuse rates based on \$1.25 a ton from the head of Lake Superior may result in improved prices on ore, as there are indications of an unusual year in iron, but any predictions under present conditions would be worthless.

Unfair Treatment in Aids to Navigation.

In its report to Congress through the secretary of the treasury, the light-house board gives to the lakes only a trifle more than 9 per cent. of the total amount recommended for aids to navigation in all parts of the country. When the commerce of the lakes is considered in comparison with that of other districts of the country, this statement would seem hardly creditable, but the following extracts from the letter of estimates to Congress from the secretary, showing recommendation for the lakes, may serve to throw light on an important side of this question of aids

to navigation that was probably not taken into account by Messrs. Keep, McKay, Bradley, Wilson and others who were in Washington last week preparing for congressional action on the subject:

| | |
|--|-----------|
| Buffalo breakwater fog-signal, New York..... | \$ 4,300† |
| Cheboygan river ranges, Michigan..... | 1,750* |
| Detroit river light vessels..... | 8,600* |
| Eagle Harbor fog-signal, Michigan..... | 5,500* |
| Escanaba fog-signal, Michigan..... | 1,100† |
| Frankfort pierhead fog-bell, Michigan..... | 1,000† |
| Galloo island fog-signal, New York..... | 5,700* |
| Grassy point range lights | 8,000† |
| Ludington fog-signal, Michigan..... | 5,500* |
| Menasha range lights, Michigan..... | 500* |
| Oswego fog-signal, New York..... | 4,300† |
| Patrol steamer, St. Mary's river, Michigan..... | 4,000† |
| St. Mary's river upper range lights, Michigan..... | 2,000† |
| South Fox island fog-signal, Michigan..... | 5,500* |
| Superior bay lights, Wisconsin..... | 1,200† |
| Tender, Ninth district..... | 95,000† |
| Total..... | \$153,950 |

† Indispensable. * Necessary.

In this statement no account is taken of any items other than those reported as indispensable or necessary, for the reason that it is not expected that Congress will, upon considering the light-house board's report without any influence presented from vessel owners and other interests, make appropriations for anything outside of that recommended under the headings referred to. The total of appropriations recommended for the lakes, as shown in the above statement, is \$153,950, but in order to make a fair comparison with recommendations for other districts there must be deducted from this the principal item, \$95,000 for a light-house tender for the ninth district; an item which provides for a new vessel to engage in the light house service, and which in no way serves to relieve the pressing need of light stations and fog signals. Deducting this item there remains of the recommendation for the lakes just \$58,950 for indispensable and necessary aids on the lakes, as against \$626,750 recommended under the same headings for other districts.

To the vessel owners and others engaged in shipping on the the lakes, who signed, just previous to the opening of Congress, petitions praying for a very large number of light stations, light-ships and fog signals that are known to be absolutely necessary for the proper safety of commerce, this certainly appears like poor treatment. The members of the light-house board should have no reason for discriminating against the lakes in this matter, but the unfair proportion of the recommendations is very plain. While it should be the aim of lake interests to seek the fullest co-operation of army and navy officers in this work, the action of the representatives who visited Washington last week and had a bill prepared covering all of the aids asked for in the petition to Congress will undoubtedly meet with general approval. The bill has been introduced in the Senate by Mr. Brice of Ohio and in the House by Mr. Taylor, also of Ohio. It is a measure equaling in importance any matter of legislation pertaining to the lakes now before Congress, and it should receive the earnest support of every member from the lake districts. The sub-committee on light houses and fog signals from the committee on commerce of the House is composed of Messrs. Brickner of Wisconsin, Houk of Ohio and Randall of Massachusetts. Two of the three members are from lake states, and it remains for the active representatives of lake commerce in Washington to present to them the importance of this bill.

The New Gloriana.

The Rudder, leading yachting publication, says of the new Gloriana, building by the Herreschoff Manufacturing Company, at Bristol, R. I., for Mr. Archibald Rogers, ex-commodore of the Seawanhaka Corinthian Yacht Club, and owner of the cutter Bedouin; "She differs somewhat from the Gloriana of 1891, being, as will be seen from the cut, a sort of compromise between the triangular keel and the fin keel. The fore edge of the lead keel drops quickly down from the bottom of the boat, being sharpened away to an edge. The amount of weight in the keel is said to be about 42,000 pounds, it being very wide at the bottom. The keel, stem and stern posts are of oak; the frames are of steel, spaced 16 inches apart; the deck-beams are also of steel; the planking for four feet above the rabbet is of single thickness, $1\frac{3}{8}$ -inch Georgia pine; above the skin is double, an inner skin of $\frac{1}{2}$ -inch white pine, an outer skin of $\frac{7}{8}$ inch; the sheer strake and plank sheer are of oak, in single thicknesses. The yacht is now almost finished, and the joiner work will be similar to the Gloriana's. It is said the sail plan will have a somewhat greater area than the old boat. The new flyer will be skippered by Captain Charles Barr, who formerly held the stick in the Minerva and Shona, and last summer on the Oweene.

"The Herreschoffs are also building for Mr. Morgan a 35-footer on the lines of the Dilemma, which boat is somewhat like the old Evolution, whose lines are thought to be very fine. She has a canoe shaped hull with nearly a flat floor, an extreme

shall be the duty of this board to examine thoroughly into the qualification of the applicant, and if he produces positive and satisfactory evidence, the board shall grant him a certificate of admission. The secretary of the navy shall appoint a governor, who shall be in charge and who may employ such additional help as he may consider necessary. He shall also prescribe the rules necessary for the management of the home, subject to the approval of the secretary of the navy.

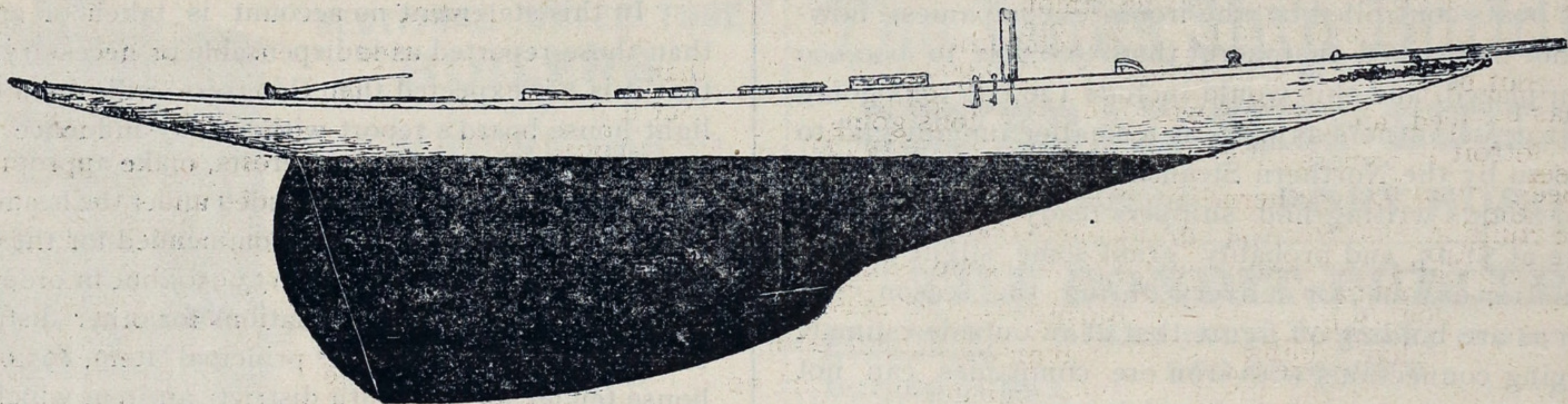
Gen. Poe Does Not Look for Better Water.

One of the most important features in the work of making contracts for next season's business on the lakes is the question water in the Sault canal and throughout the rivers. The water is higher now than it was at this time a year ago, but Gen. Poe does not look for improvement next spring. He says in answer to inquiry from the REVIEW on the subject:

"Replying to yours of the 18th inst., I have to say that the mean available depth at St. Mary's Falls canal during the month of December, 1891, was 14.11 feet, as against 14.82 feet for the month of December, 1890, a difference of .71 feet, or $8\frac{1}{2}$ inches.

"During the season of navigation the water-level records at the canal are reported to this office daily, but during the winter season they are sent at the end of each month only. I am therefore unable to send you a comparison for the expired portion of the months January 1890 and 1891.

"I attach very little importance, however, to the winter observations, because the results are greatly affected by the ice. I



THE NEW GLORIANA.

rocker to the keel, and an overhang bow and stern. Her stability is secured by a steel plate bolted to the center of the keel and weighing 800 pounds, to the lower edge of which is attached a cylinder of lead, sharp on both ends and weighing almost 2 tons. The dimensions of this boat are: 35 feet length of water line; 50 feet over all; 8 feet beam and 8 feet draught."

Movement in Favor of a Home for Veteran Seamen.

The bill to create a home for crippled, infirm and aged seamen of the merchant marine service, introduced in the house a few days ago by Congressman Johnson of Cleveland, is the outcome of the agitation of this question by the Veteran Seaman's Benevolent Association of Cleveland, organized a short time ago. The association supporting the bill favors no special location for the home, as the members feel that the success of such an institution wherever it might be located would result in the establishment of similar homes on the Atlantic and Pacific coasts and on the lakes. The bill seeks to have the work of erecting and managing the institution given over to the secretary of the navy.

Persons to be admitted to the home, according to the bill, shall be citizens and residents of the United States for at least five years prior to their making application, and shall have sailed at least five years under the flag of the United States, and shall be so disabled, infirm or aged that they are unfitted to longer follow their calling. Applications are to be made to an examining board; this board to consist of the collector of customs, the United States marine surgeon and the inspector of hulls for the district in which the institution is located. It

do not see anything in present conditions to induce a hope that the stage of water will be any better in the spring than it was at the close of navigation last fall. A very heavy snow fall this winter may result in a better stage later in next season, but the outlook is not very encouraging,—more is the pity."

Pig Iron Production.

The American Manufacturer of Pittsburgh estimates the total production of pig iron in the United States during the year 1891 at 8,196,127 gross tons. The estimate is based on official figures for the first six months of the year. This would represent a falling off of 1,006,576 gross tons as compared with 1890 when the production was 9,202,703 gross tons. The difference was caused mainly by the stoppage of the Mahoning and Chenango furnaces for several months in the early part of the year.

December production was small as compared with the three previous months of the year, and the falling off was mainly in coke iron. The production on Dec. 1, 1891, was at the rate of 193,009 tons per week, while on Jan. 1, 1892, thirty days later, the rate of production was but 191,442 tons per week.

At Superior it is proposed to equip a small shallow barge with pumps for fire service and depend upon the many tugs and ferry boats in the harbor to tow it to any portion of the river or bay in case of fire. It is thought that a boat of this kind could be built and equipped for \$3,000 or \$4,000, and would require the services of but one man at all times. Economy is one of the main features of the plan.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St. Cleveland, O.

| Stocks. | Par Value. | Bid. | Asked. |
|---------------------------------------|------------|---------|----------|
| Cleveland-Cliffs Iron Company..... | \$100 00 | \$..... | \$ 79 00 |
| Champion Iron Company..... | 25 00 | | 75 00 |
| Chandler Iron Company..... | 25 00 | 47 00 | 48 25 |
| Jackson Iron Company..... | 25 00 | | 100 00 |
| Lake Superior Iron Company..... | 25 00 | | 67 00 |
| Minnesota Iron Company..... | 100 00 | | 80 00 |
| Pittsburg Lake Angeline Iron Co | 25 00 | 148 00 | |
| Republic Iron Company..... | 25 00 | 25 50 | 27 00 |
| Ashland | 25 00 | | |
| Section Thirty-three..... | 25 00 | 6 00 | |
| Brotherton..... | 25 00 | 2 50 | 3 00 |

Heavy sales of ore and the general assurance of a big business for Lake Superior mines next season have caused some improvement in the market for stocks. Values are all quoted higher than they have been for some time past. For Pittsburgh and Lake Angeline, which pays \$2 a month per share in dividends, \$148 is bid, and \$67 is asked for Lake Superior with Chandler at \$48.25 and Republic at \$27. Brotherton, one of the Gogebic properties, comes into the market as a dividend payer, the company having announced its intention to pay 50 cents a share. This company mines an ore of the very best quality, although its output has not been large. Very little ore was mined last year but the greater portion of the product during the present year has very probably been disposed of.

J. Parke Channing, M. E., discusses the recent fire at the Lake Superior mine in the current issue of the Engineering and Mining Journal. He also discusses the method of coping with the fire at the Aurora mine some time ago, and says in conclusion: "From my experience the best way to extinguish a mine fire is to cut off the supply of oxygen as quickly as possible and be very careful not to open up too soon after the fire is supposed to be out. Steam, if it can be applied in the immediate vicinity of the combustion, is excellent. Artificial carbonic gas I have not much faith in. While it is supposed to be heavier than air and settle down to the bottom of the mine, it is, as it leaves the tanks where it is produced, very hot from the heat engendered by the reactions producing it, and hangs around the collar of the shaft. A fierce fire will soon use up all the oxygen in a sealed mine and then carbonic acid will be present in far larger quantities than can be generated by chemicals on the surface."

New work on the properties of the Lake Superior Iron Company is again as extensive as at any point in the mining district. During the past season this company completed a new shaft to the section 16 deposit and one at the east end of the Hematite workings for the purpose of reaching ore extending beneath Lake Angeline. It has two more in course of sinking at section 21, a short distance south of Ishpeming. It is also straightening No. 6 shaft so that a cage can be used therein. A large steam shovel has been added to the mine's equipment. On section 21 the first shaft has reached a depth of 80 feet, and hoisting has been commenced at the second. At this point the Winthrop Iron Company has developed a large body of ore on the property of the Lake Superior, and it is for this, and its extensions, that the latter company is sinking.

Ore from both the Hamilton and Ludington mines is of high grade and the mines are big producers, so that the accident through which they were flooded is particularly unfortunate at this time, as mining work will undoubtedly be suspended for several months. The flow of water was from a "vug" in the hanging lime rock, which has emptied itself into the mines, and the mine managers are satisfied that after the shafts are unwatered no more difficulty will be experienced in keeping them free of water than before the recent inflow occurred.

The Gogebic Iron Syndicate, owning the fee to a large tract of mineral property from which a great deal was at one expected held its annual meeting in Milwaukee a few days ago, when the following directors were elected: John Huntington, J. V. Painter, H. C. Wick, D. B. Wick, H. C. Ellison, F. B. Wagner, F. G. Osmer, C. C. Ruthrauff and A. S. Upson of Cleveland; A. H. Pomeroy of Barry, Ohio, and F. H. Smith of Milwaukee. A proposition to make an assessment of \$10,000 for improvements is being considered.

A party made up of R. S. Carr and A. E. Humphreys of Charleston, R. Ballard and W. B. Crane of Cincinnati, A. J. Decker of Indianapolis, and G. E. Milligan, R. J. Camden and R. T. Herndon of Parkersburg, W. Va., has been making an investigation of the new Mesaba range with a view to investing in some of the properties.

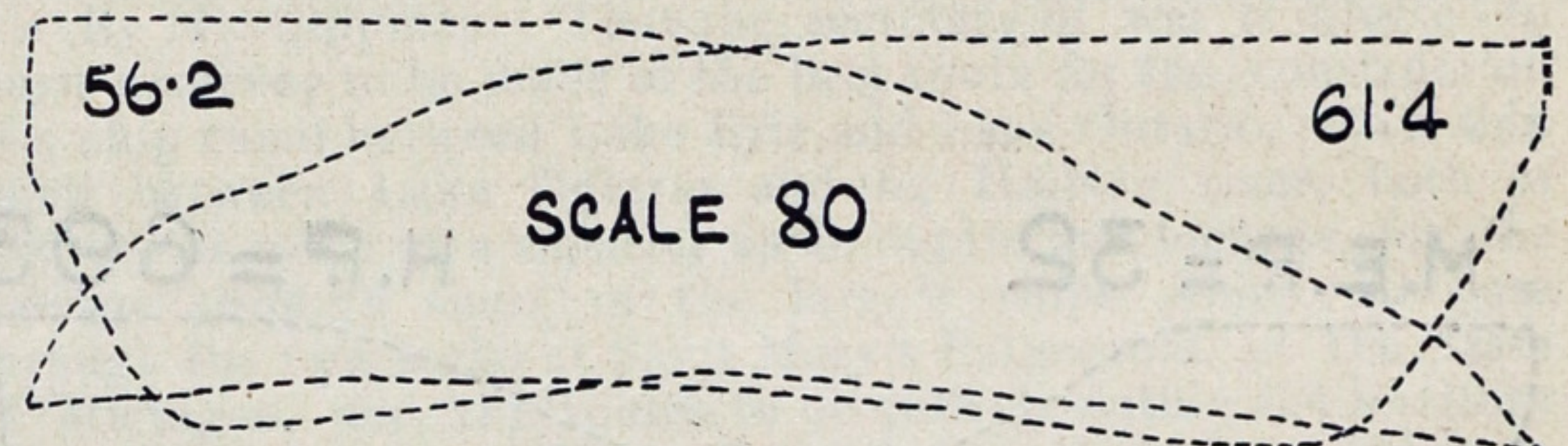
W. J. Olcott, who has been superintendent of the Colby mine at Bessemer for some time past, will shortly assume the general management of the mines of the Penokee and Gogebic Development Company, succeeding A. L. Dickerman, who has resigned to take charge of western mines.

Indicator Cards From the Emily P. Weed.

Indicator diagrams from the triple expansion engines of the steel steamer Emily P. Weed, built by F. W. Wheeler & Co. of West Bay City, Mich., and engined by S. F. Hodge & Co., Detroit, Mich., were printed last week. Below is another set of cards designated series No. 5, taken on the same trip as those of last week. The cylinders are 23, 37 and 62 x 42 inches; steam in this case 145 pounds; vacuum 25; revolutions 84; total indicated horse power 1,562.

H.P. CYL.

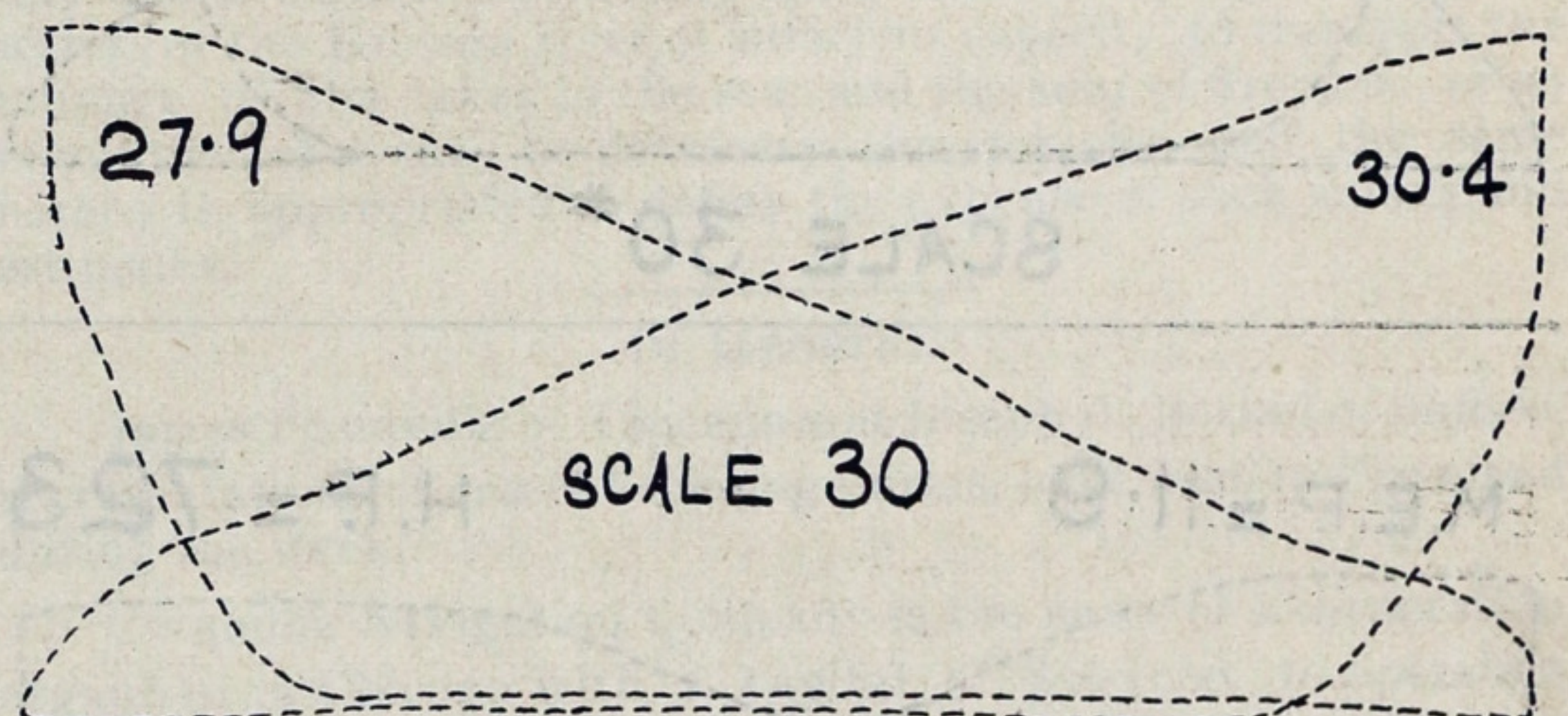
H.P. 434



M.E.P. = 58.8

INT. CYL.

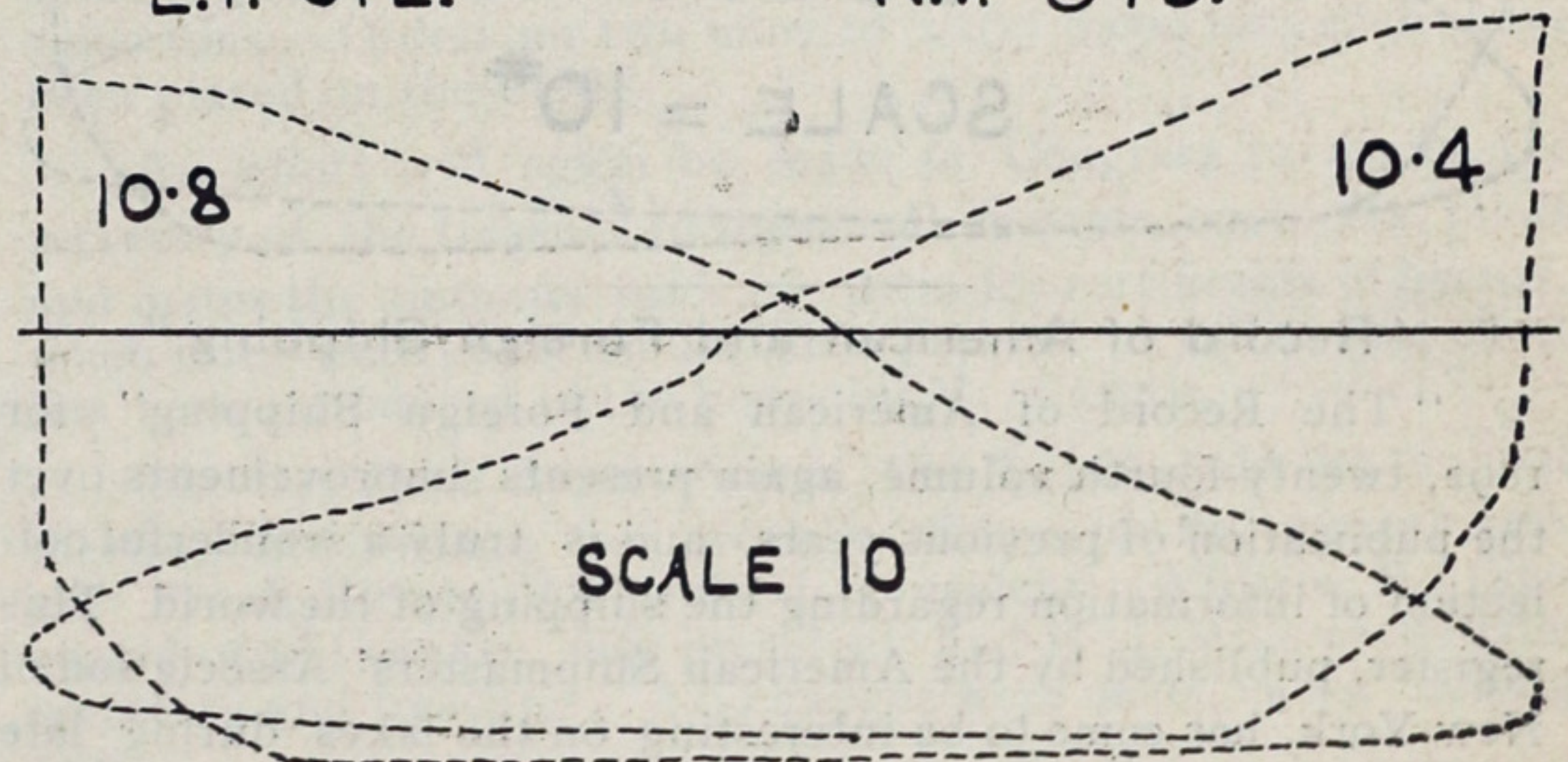
H.P. 558.



M.E.P. 29.15

L.P. CYL.

H.P. 570.



M.E.P. 10.6

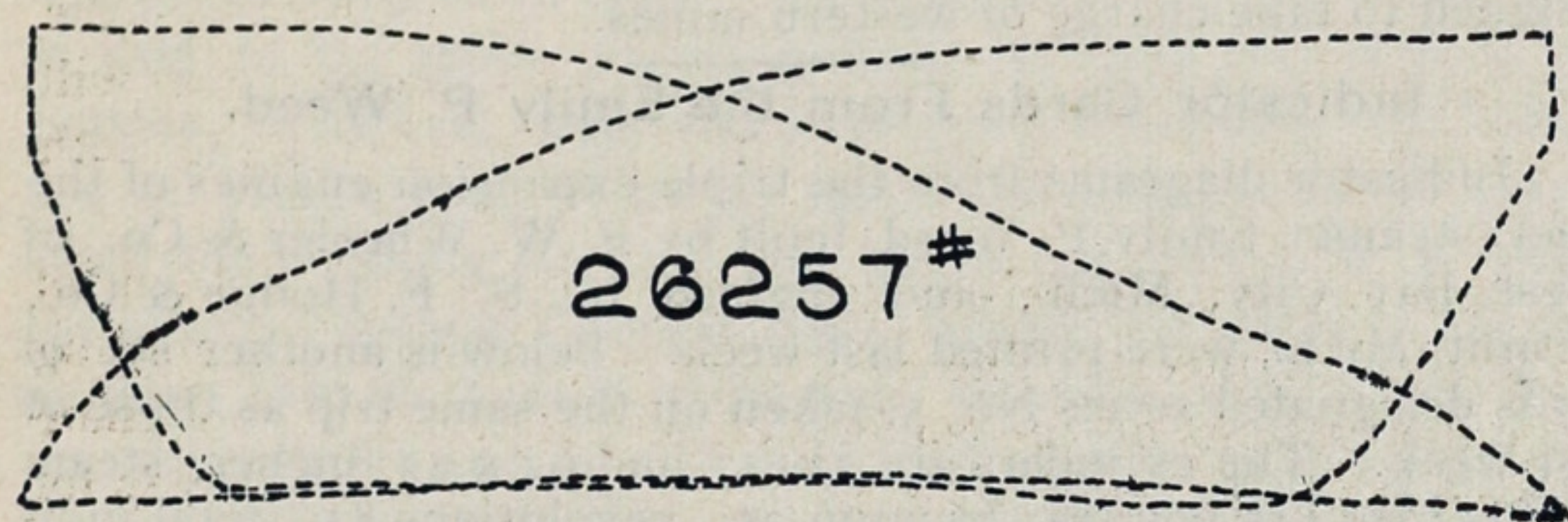
Twenty-four answers have been received during the past week by parties who wanted to purchase a low grade schooner for lightering purposes and inserted an advertisement under the heading "Vessel and Machinery Exchange" in the MARINE REVIEW.

(INDICATOR CARDS, SEE PAGE 5.)

On the preceding page is given series No. 5, indicator diagrams from the engines of the steamer Emily P. Weed. The following diagrams, designated series No. 7, were taken some time later with a reduced blade area of the propeller. Vacuum in this case 25 inches; revolutions 95; total indicated horse power 1,945.

M.E.P. = 63.2

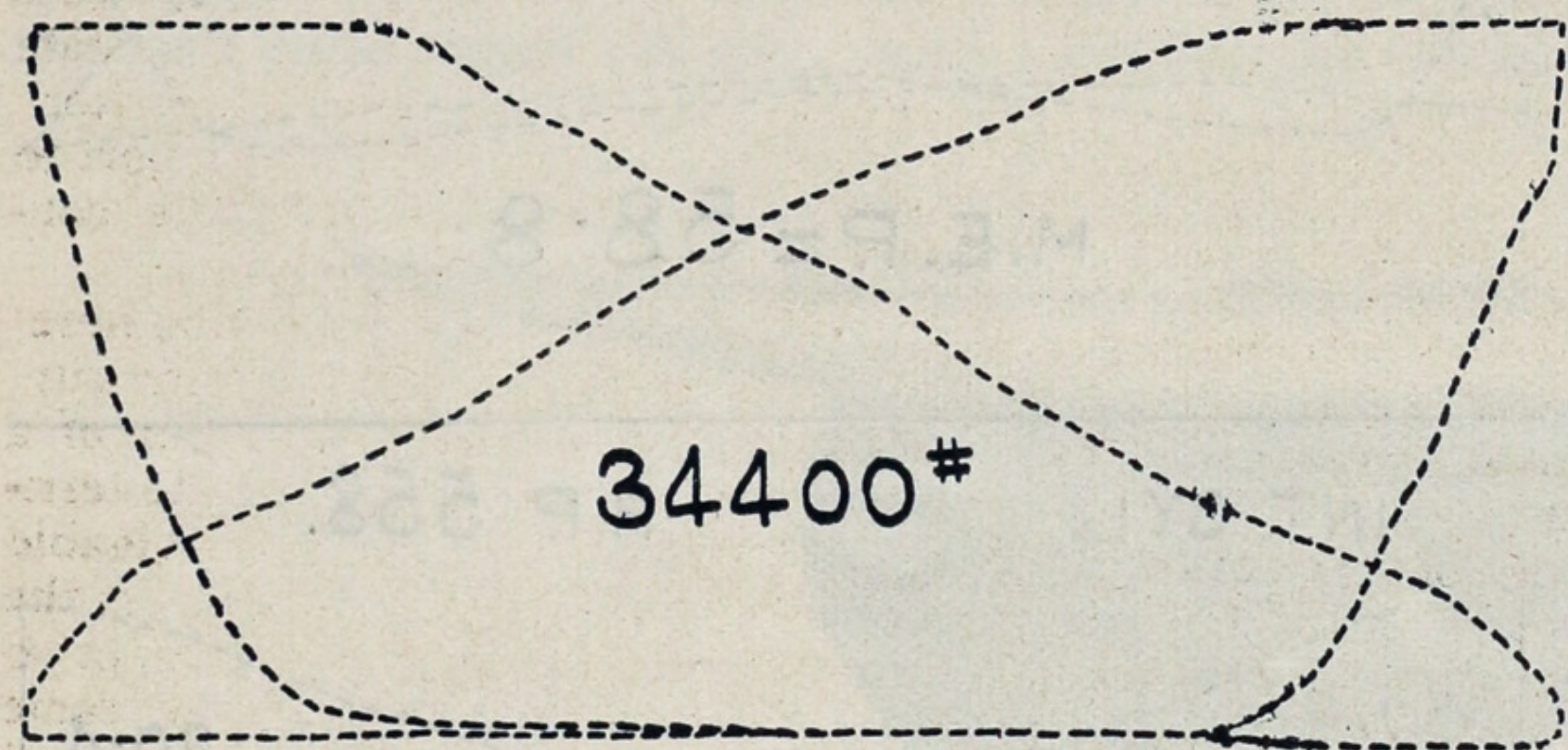
H.P. = 529



SCALE = 80#

M.E.P. = 32

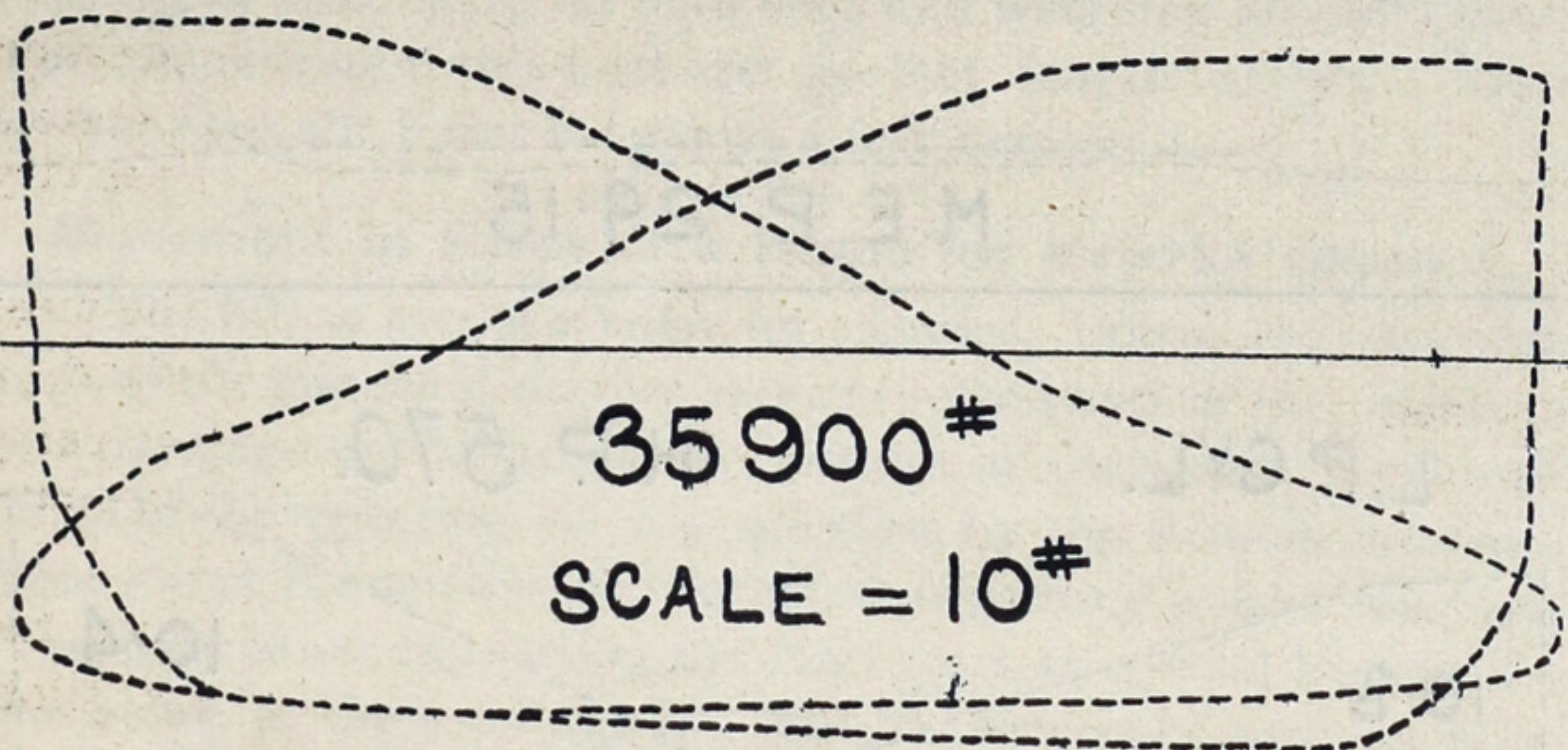
H.P. = 693



SCALE 30#

M.E.P. = 11.9

H.P. = 723



SCALE = 10#

"Record of American and Foreign Shipping."

"The Record of American and Foreign Shipping" for 1892, twenty-fourth volume, again presents improvements over the publication of previous years, and is truly a wonderful collection of information regarding the shipping of the world. This register, published by the American Shipmasters' Association of New York, has come to be interesting on the lakes during late years, on account of its classification of lake steamers for the benefit of underwriters other than those having general agencies on the lakes. Joseph R. Oldham, N. A., Cleveland, is the lake representative of the record and we are indebted through him to the association for a copy of the book.

Send 75 cents to the MARINE REVIEW for a Binder that will hold 52 numbers.

Insreasing Winter Traffic on Lake Michigan.

Special Correspondence to the MARINE REVIEW.

MILWAUKEE, Wis., Jan. 21.—Ten steamers are at present plying across Lake Michigan delivering freight, principally flour, to the eastern trunk lines, and next winter there will probably be twelve. The Delaware & Lackawanna Railway Company last week established a route between Keewaunee and Frankfort with the steamer Osceola, which left Port Huron the first week in January and succeeded in passing through the Straits without great hindrance from ice. The eastbound freight handled by the Osceola reaches the Lackawanna system at Toledo over the Toledo, Ann Arbor & Northern Michigan Railway. According to current gossip the Canadian Pacific will also compete for a share of the flour trade of the west another winter. Having secured an entrance to Detroit, Grand Haven will next be reached through a traffic arrangement with the Chicago & West Michigan and Detroit, Lansing & Northern railways, and a line of steamers will then be run between Grand Haven and Milwaukee during the winter months at least. The large whaleback steamers Pillsbury and Washburn, now in course of construction at West Superior, to run between Gladstone and Buffalo, are virtually the property of the Canadian Pacific Railway Company, and unless found too large will no doubt be utilized for this new winter line. The information here conveyed affords a satisfactory explanation of rumors that have been afloat for several weeks concerning a proposed introduction of whaleback steamers on the Grand Haven route in the near future. The present Grand Trunk management is too sluggish to even dream of improving its service, and it will devolve upon the Canadian Pacific to introduce an innovation that may serve as an eye-opener. Of the steamers trading out of Milwaukee just now the only ones at all uncertain in their movements are those of the Eastern Transit Company, which once more ply to St. Joseph after a brief and unsatisfactory trial of Grand Haven. They hardly average a round trip each a week.

While en route for Buffalo in November last the steamer Thomas Davidson became disabled below Sand Beach, Lake Huron, through the loss of her shoe and a broken wheel. She was picked up by the steamer John Harper and towed to Port Huron, a distance of less than 50 miles. For this service the owners of the Harper recently preferred a claim of \$5,000. An effort was made last week to reach a satisfactory settlement, but the Harper people declined to accept less than \$4,000, and expressed a willingness to submit the matter to arbitration. As between arbitration and litigation Com. Wolf can see little difference in expence. Hence he proposes to let the claimants collect their tow bill through the medium of the courts. This reminds the correspondent that a similar heavy claim preferred by the Ogdensburg Transit Company for service rendered to the steamer R. P. Flower by the steamer Waverly in Lake Huron was settled not so very long ago on a proposition coming from the transit company, the owners of the Flower paying \$1,000 and the claimants assuming all costs that had been incurred through libeling the Flower.

Capt. David Vance left Milwaukee on a business trip to England last Saturday. He was accompanied as far as New York by Frank L. Vance.

A single transfer of vessel property was recorded at the Milwaukee custom office last week—the schooner Hattie Hutt, by Lewis Hutt, of Chicago, to Ole Hansen, of Mantowoc, for \$4,500. The Hutt measures 252 net tons and rates A2.

Machinery in Some of the Wheeler Boats.

Special Correspondence to the MARINE REVIEW.

WEST BAY CITY, Mich., Jan. 21.—The new steel steamer for the Hollister Transportation Company, now building by the F.W. Wheeler & Co. and which is to be a companion to the Emily P. Weed, will have an engine 23, 37 and 62x44 inches, 160 revolutions per minute. This engine is now in the shops of the Frontier Iron Works, Detroit, and Wickes Bros. of East Saginaw are building the boilers. Worthington pumping machinery will be used throughout. The condenser pump will be nearly a duplicate of that on the Weed. The boiler feed pumps are different from any that have as yet been used on the lakes and are of the Worthington "admiralty pattern," such as is used on trans-Atlantic steamers of the White Star and Inman lines.

The steamer Ossifrage is rebuilding and being lengthened by F. W. Wheeler & Co. She is to have a new engine, 13½, 20 and 37x24 inches, which is now being constructed at their shops. A new Worthington condenser will be used. It is worthy of note that the old Ossifrage was one of the first boats on the lakes to have a Worthington condenser. The steamer Massauga, owned by Mr. C. H. Woodruff, was the first, and immediately following was the steamer Mary of St. Clair river fame. The Massauga and Ossifrage were non-condensing previous to this time but the steamer Mary had attached air pumps that had been giving a great deal of trouble. After the change she became noted for her speed and the accuracy of her running, making almost absolute time at her different landings.

Write "MARINE REVIEW, 510 Perry-Payne Bldg., Cleveland, O.," on an envelope, write your address on a slip of paper, enclose a dollar bill, and mail it for six month's subscription to the only illustrated marine paper on the lakes.

Another Virginia.

The Gooderich Transportation Company will undoubtedly contract very shortly for another passenger steamer, equal in every way to the magnificent Virginia, and it is very probable that the boat will be built by the Detroit Dry Dock Company, Frank E. Kirby being given a chance to try his hand in her design. Whether the new boat will be a duplicate of the Virginia or not, has not as yet been decided, and it is not probable that she will be out before the spring of 1893, whoever the builders may be. When in Cleveland a short time ago, talking of the new boat, Mr. Gooderich had under consideration a screw steamer built up with guards similar to a side-wheel boat, the aim in this design being to secure two rows of staterooms on either side.

Worthless Canal Schemes.

Congressman Stephenson of Michigan is a willing and able representative of the mining and marine interests of the lakes, and no one can charge him with being unable to judge between practicable and visionary schemes for government aid to the commerce of lake districts. Yet it does seem strange to see his name attached to a bill providing for a survey for a ship-canal from Little Bay de Noc on Lake Michigan to a point on Lake Superior in Michigan. The bill is introduced, of course, to satisfy a local constituency, and will be pigeon-holed in committee, though it may with other bills of the same kind tend to lessen interest in important measures for improvements. The question of a canal between Lakes Michigan and Superior has been very thoroughly discussed on several occasions in the past, and it has been clearly demonstrated that there is little to recommend it, and its cost, admitting that the scheme is practicable, would be enormous.

The scheme for a canal from Lake Erie to the Ohio river is also being boomed to the detriment of worthy measures. In addition to the bill introduced in the Senate by Mr. Quay, two other bills for this Pennsylvania canal have come forward in the House. One of them, by Mr. Gillespie, makes Conneaut the Lake Erie terminus for a survey and the other would have the canal start out in the vicinity of the city of Erie. The coal producers and iron furnace owners in and around the city of Pittsburgh who have some practical knowledge of the lake business, are silent on the subject of this scheme, notwithstanding the apparent zeal of Pennsylvania congressmen.

Congressman Castle has introduced another bill that will meet with the fate of the Pennsylvania and Michigan schemes. It is as follows: "That the secretary of war is hereby directed to cause to be made a survey or surveys from navigable waters on the Saint Croix river, in the states of Minnesota or Wisconsin, to the bay of Superior at Duluth, or as near thereto as practicable, at some point on Lake Superior, for the purpose of determining the practicability of a canal between said points. Such survey shall determine as to the feasibility of a canal of three, five, seven and ten feet in depth, and the secretary of war shall report to congress the result of such survey and estimate of the cost of the construction of such canal." The modest sum of \$40,000 is sought for the survey.

To Meet Committees of Congress.

A joint session of the commerce committee of the Senate and the river and harbor committee of the House of Representatives will be held in the committee room of the river and harbor committee, in the Capitol at Washington, Saturday, the 30th inst., at 10:30 a. m., for the purpose of granting a hearing to the delegates from the Detroit deep waterways convention. An error of print caused it to be announced last week that the meeting would occur on the 20th inst. The convening of these two important committees together is a great concession to the lakes, and the different commercial organizations that are expected to

have representatives in Washington should take advantage of it. In a notice sent out regarding the Washington gathering Mr. C. H. Keep, secretary of the legislative committee, says: "In view of the immense importance of this hearing and its far-reaching results, the chairman of the convention requests me to emphasize strongly the imperative necessity of a large attendance at Washington on the 30th inst. Every organization represented in the convention should, if possible, send a large delegation, and not an organization should be without representation. The delegates should all arrange to arrive in Washington by noon of the day before the hearing. The Arlington hotel will be the headquarters of the delegation, and preliminary conferences will be held there on the afternoon and evening of Friday, the 29th inst."

Gen. Poe will be present at the meeting, by permission of the chief of engineers. The committee will, of course, according to the instructions of the convention, advocate the 20-foot channel project for the lakes, seek an appropriation for a survey for an outlet to the Atlantic and urge the necessity of liberal appropriations for aids to lake navigation.

Congressmen Chipman and Bentley have both introduced bills for the proposed canal survey. They are as follows:

By Mr. Chipman.—That the secretary of war is directed to cause a survey to be made of the best route for the construction of a ship canal between Lake Erie and Lake Ontario; also a ship canal between Lake Ontario and the Hudson river, both of said canals to be of a capacity as to depth and lockage for the passage through them of the largest ships which can pass through the new locks at Saint Mary's Falls canal, in the state of Michigan, and the routes to be entirely within the territory of the United States. The said secretary is directed to report to Congress the routes surveyed, the probable expense of the construction of said canals, and the practicability of the same.

By Mr. Bentley.—That the secretary of war be, and he hereby is, authorized and directed to cause to be made accurate surveys, examinations and final estimate of cost of construction of a ship canal by the most practicable route wholly within the territory of the United States from the great lakes to the navigable waters of the Hudson river, of sufficient capacity to transport the tonnage of the lakes to the sea; and the sum of \$100,000, or so much thereof as may be necessary therefor, be, and the same hereby is, appropriated to defray the expense of such survey and estimates.

In General.

James Prindville of Chicago and Joseph A. Boland of Buffalo, representatives of vessel brokerage firms, have been in Cleveland during the week.

Columbia Navigation Company is the name of a corporation organized in Chicago with a capital of \$500,000, to operate a freight and passenger line between the central part of the city and the World's Fair grounds.

The increasing size of modern steamships is one of the most decided tendencies of the times. At Hartlepool, England, a short time ago an order was placed for a cargo steamer to carry 7,000 tons. Orders for two more to carry 6,000 tons each have been placed on the Clyde.

An effort will again be made in Congress to direct the secretary of the treasury to repay all masters, engineers, pilots and mates the amounts paid by them for certificates of license, when dues were collected for such papers. A bill to that effect has been introduced in the house by Mr. Caruth.

The Dry Dock Association of the Lakes held its annual meeting at Chicago last week. Officers for the ensuing year are: Frank Wright of Cleveland, president; William E. Fitzgerald of Milwaukee, vice president, and H. J. Mills of Buffalo, secretary and treasurer. No changes were made in the docking rates.

Hudson is the name given to a revenue cutter to be built for coast service, and for which an advertisement to shipbuilders appears elsewhere. The boat will be of iron or steel, 96.4 feet long, 20.6 feet wide and 10.3 deep. She will have triple expansion engines with cylinders 13, 20 and 31 1/2 x 24 inches stroke. A Ward tubular boiler is specified.

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, } PROPRIETORS.
F. M. BARTON, }

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210 South Water Street.

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The books of the United States treasury department contain the names of 3,510 vessels, measuring 1,063,063.90 tons in the lake trade. In classification of this fleet the lakes have more steamboats of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country. The classification is as follows:

| Class. | Number. | Tonnage. |
|----------------------|---------|--------------|
| Steam vessels | 1,527 | 652,922.25 |
| Sailing vessels..... | 1,272 | 328,655.96 |
| Canal boats..... | 657 | 67,574.90 |
| Barges..... | 54 | 13,910.09 |
| Total..... | 3,510 | 1,063,063.90 |

According to the report of William W. Bates, United States commissioner of navigation, 46 per cent. of the new tonnage of the country was built on the lakes during 1889. This is a percentage greater than the work of the Atlantic coast and western rivers combined, and almost equal to the whole work on the Atlantic and Pacific coast. In 1890 the tonnage built on the lakes is but very little less than that built on the Atlantic and Gulf coasts. Tonnage built on the lakes during the past five years was as follows:

| | No. of boats. | Net Tonnage. |
|------------|---------------|--------------|
| 1886..... | 85 | 20,400.54 |
| 1887..... | 152 | 56,488.32 |
| 1888..... | 222 | 101,102.87 |
| 1889..... | 225 | 107,080.30 |
| 1890..... | 218 | 108,515.00 |
| Total..... | 902 | 393,597.03 |

St. Mary's Falls and Suez canal traffic: Number of boats through St. Mary's Falls canal in 1890, 234 days of navigation, 10,557; tonnage, net registered, 8,454,435. Number of boats through Suez canal during 1890, full year, 3,389; tonnage, net registered, 6,890,014.

Entered at Cleveland Post Office as Second-class Mail Matter.

IRON ore, the greatest of all commodities making up the transportation business of the lakes, has again been attacked by a special tariff bill introduced in the House of Representatives a few days ago, and though there is no danger of ore being placed on the free list, as proposed by the bill, it is the duty of all lake interests to join in a protest against this measure. To allow such a bill to pass the House without opposition might cause the impression to go out that there is a lack of proper interest in the protection of this great interest on the lakes. That the Lake Superior ore interests will be represented before the ways and means committee of the House when this bill comes up for consideration, there is no doubt, providing, of course, that a hearing is granted by the committee. There is a duty further than this, however, that devolves upon the shipping interests in every portion of the lakes. Protection has been a great factor in the wonderful growth of lake commerce. The present Congress is a political Congress and its action on special tariff measures will be guided largely by sentiment having a bearing upon the coming presidential campaign. The Mills bill as originally reported to the House contained a free ore clause but it was stricken out before the bill was passed. The growing iron interests of the south caused this change. These southern interests have advanced ten-fold since the Mills bill was passed and they can well be enlisted against the present movement for free ore.

AMONG the bills introduced in Congress last week is one by Representative Crain, as follows: "That every owner of any steamer navigating the ocean or any lake, bay, sound or river of the United States, shall provide proper ventilation for the engine rooms of said steamer so that they may be supplied with fresh air; and that every owner of any such steamer who neglects or refuses to comply with the

provisions of this act shall be fined one thousand dollars." In the case of a few steamers built on the lakes during recent years there was cause for complaint on account of crowded quarters around the machinery, and this is one of the defects charged up to the McDougall barges. If engineers intend, however, to make a demand for improved engine rooms through Congress, it would seem necessary to prepare a better bill than the one just quoted, as it has the appearance of a measure hastily prepared and so broad in its provisions that it would be worthless if made a law.

BILLS have been introduced in Congress providing for making Ashland and Superior ports of entry. Sault Ste Marie desires similar advantage and Two Harbors is yet to be heard from. Although such measures would result in benefit to lake interests generally, the people who are urging them should be patient until more important matters are disposed of. They will get nothing in this line from the present Congress. Only a few days ago a bill was introduced calling for the consolidation of customs districts in different parts of the country, with a view to reducing expenses of the treasury department.

UNDER the statutes of the United States the word "ship" is taken to comprehend "every description of vessel navigating on any sea or channel, lake or river," and all persons engaged in the navigation thereof are considered as "seamen"

Fifty Second Congress—First Session.

The following bills of interest to lake vessel owners have been introduced in Congress during the past week:

H. R. 2758, Crain—To compel owners of steamers to supply fresh air to the engine rooms.

H. R. 3,862, Taylor—Providing for sundry light-houses and other aids to navigation.

H. R. 320, Johnson—To create a home for crippled, infirm and aged seamen of the merchant marine service.

H. R. 283, Bently—For ascertaining the feasibility and probable cost of constructing a ship canal from the great lakes to the navigable waters of the Hudson river.

H. R. 364, Dalzell—Providing for a survey of a route for a ship-canal to connect the waters of Lake Erie and the Ohio river

H. R. 379, Gillespie—Authorizing the secretary of war to cause a survey to be made for a ship-canal connecting the waters of Lake Erie and the Ohio river.

H. R. 658, Stephenson—Providing for the survey of a ship-canal connecting Lakes Michigan and Superior.

H. R. 207, Chipman—Providing for a survey and estimate of expense of the construction of a ship-canal from Lake Erie to Lake Ontario and a ship-canal from Lake Ontario to the Hudson river.

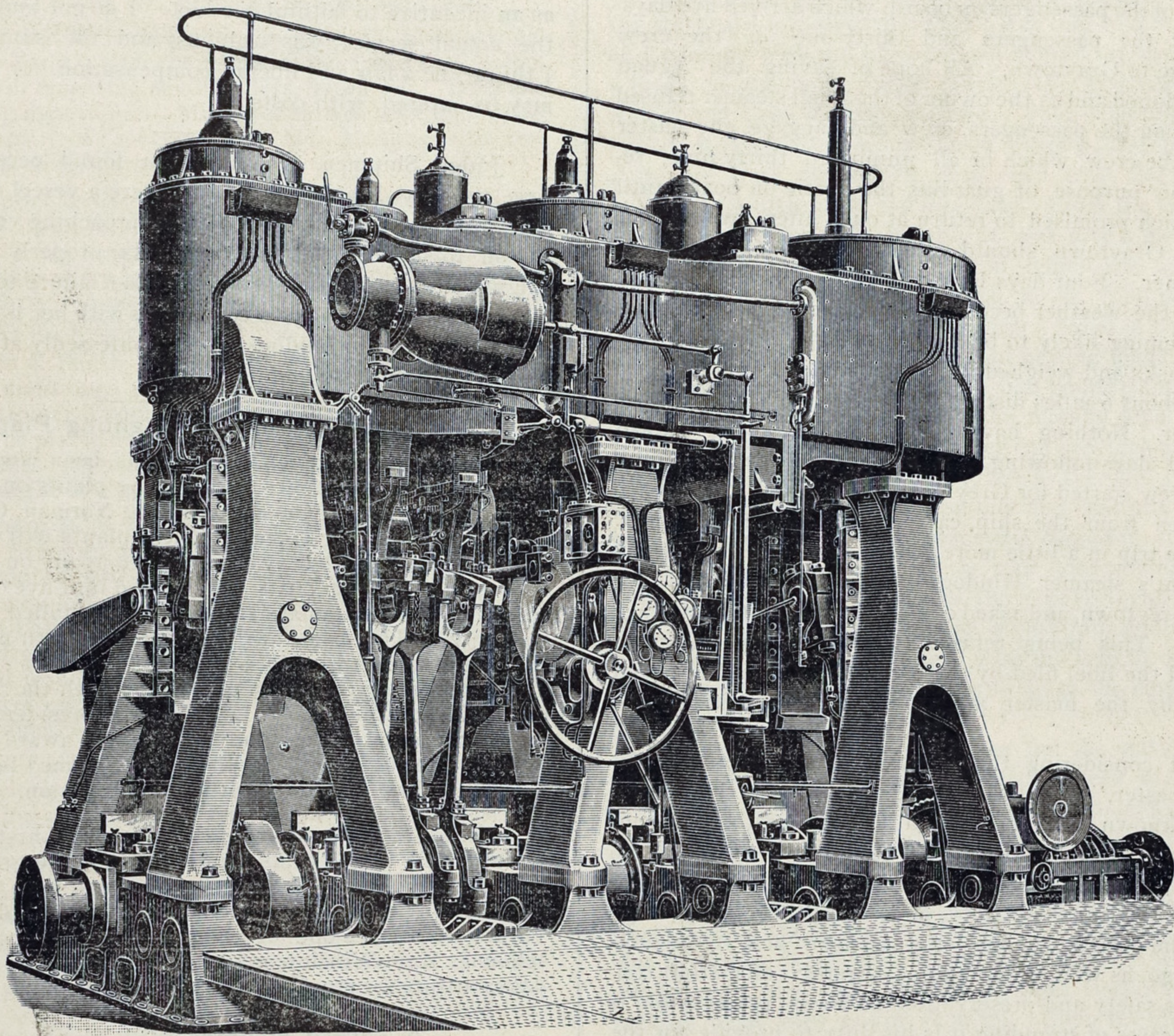
Stop on Conflicting Whistles.

United States judges continue to insist that steamers must come to a standstill when whistles are heard and there is danger of a misunderstanding. A short time ago the freight and passenger steamer Jenks when nearing New York in the Hudson river, ran into a fog so thick that vessels could not be seen more than 150 feet distant, and thereupon hauled in towards shore to keep in sight of the piers. The ferry boat Midland was crossing the river. Each vessel heard the whistles of the other near at hand and both stopsd their engines, but the Jenks did not reverse at all and the Midland not until the other vessel was seen within 150 feet and too late to avoid collision. Judge Brown of New York held that with fog signals sounding very near at hand, and nearly ahead, it was the duty of each vessel to come to a standstill in the water, by reversing as soon as possible, until their respective positions were discovered. As each was in this respect chargeable with the same fault, the damages were divided.

Engines of the Steamer Boston.

The steamer Boston of the Yarmouth line is probably the fastest freight steamer entering the port of Boston. She has attracted a great deal of attention on account of her engines, an engraving of which is herewith presented through the kindness of the editor of the American Shipbuilder, New York. "The vessel is a remarkable one," says the Shipbuilder, "because the task put before the builders was very difficult. The length of the ship was restricted to 245 feet and only a light draft was admissible. A dead weight of 250 tons was to be carried at a speed of 17 knots and forced draft was not to be used, and only a single screw. The result was more than satisfactory, for on trial on the measured mile with all her dead weight on board a mean speed of 18.22 knots was made. The steamer is built of mild steel, 245 feet between perpendiculars, breadth 36 feet, depth from awning deck 21 feet, with a shade deck above extend-

changable and reversible pieces, and has six extra long bearings on the bed-plate lined with white metal. All the surfaces of the several working parts are large, and attention has been given to the lubricating arrangements, the crank pins having centrifugal lubricators. There are two air pumps, each 23 inches in diameter by 15 inches stroke, worked by levers from the high-pressure engine. The condenser is separate from the engines, and stands on wrought iron stools, built up from the ship's floors. It contains 7,000 square feet of cooling surface, and is made of mild steel plates with cast iron ends. There are two separate and independent centrifugal circulating pumps; separate bilge and ballast pumps, and the feed pumps are automatically controlled from the float tank. Steam is supplied at a pressure of 160 pounds per square inch by one single-ended and two double-ended boilers. The former is 11 feet long, and the latter 18 feet 3 inches, and the three are each 14 feet 6 inches in diameter. There are in all fifteen Purves patent ribbed furnaces, each 3 feet 6 inches in diameter. The total grate area is 315 feet, and the heating surface 10,300 square feet.



ENGINES OF THE STEAMER BOSTON.

ing the whole length and breadth of the ship and up to which the sides of the vessel are carried, except for a length of ten feet at the stem. The vessel is schooner rigged and has two funnels. She was built by Alex. Stephens & Son of Linthouse, Glasgow.

"The engraving is a front view of the engines, which are triple expansion, having cylinders 34, 51 and 84 inches in diameter, by 36 inches stroke. They were specially designed to combine lightness with the strength and rigidity necessary in a high speed engine running continuously. The cylinders are supported by V-shaped columns of cast iron, spread out longitudinally and laterally to give great stability. The high pressure cylinder is fitted with a piston valve and the intermediate and low pressure cylinders have double ported slide valves. The valves are operated by ordinary link motion, the reversing gear being of the all round type. The pistons are of cast steel, while the piston rods are ingot steel. The crank shaft is built of ingot steel, the webs being wrought iron. It is in three inter-

Steam Whistle at Point Betsy.

The January bulletin from the light-house board regarding changes in aids to navigation, notes the establishment of a 10-inch steam whistle at Point Betsey light station, east shore of Lake Michigan. The characteristic of the signal is blasts of 5 seconds duration, separated by alternate silent intervals of 10 and 40 seconds. The fog signal house stands about 175 feet N. E. by N. from the light tower. It is a corrugated iron structure painted dark brown.

The company which is to operate a line of whaleback steamers between Gladstone and Buffalo will be known as the Minneapolis, St. Paul and Buffalo Steamship Company. The incorporators are W. D. Washburn, John S. Pillsbury, B. B. Langdon, F. D. Underwood, Thomas Lowry and C. E. Wales. Board of directors, W. D. Washburn, Thomas Lowry, B. B. Langdon, John Martin and F. D. Underwood. The capital stock is \$500,000.

Affairs in Admiralty.

THE LAW OF SALVAGE.

A decision handed down recently by Judge Brown of the United States district court, New York, in a suit brought by a steamship company, to recover salvage is interesting as showing, among other things that the shipmaster is agent of the cargo as well as the vessel. In March, 1891, the steamer Aguan, on a voyage from New York to Greytown, Central America, stranded on the outer shores of Rancador island, about six miles from that island and 300 miles from Greytown. The island of Rancador has no inhabitants except fishermen, who have huts there for a part of the year. Forty passengers, with provisions and baggage, were landed at Rancador on the same day, and the chief officer with four men, was dispatched on a boat to Corn island, some 200 miles distant, for the small steamer Presidente Carazo, belonging to one of the passengers on board, which arrived five days later and took the passengers and thirty-one of the crew and the baggage to Graytown. All hope of saving the Aguan had been abandoned and as the owner of the small steamer refused to take more than the passengers, crew and baggage, the master with seven of the crew, which in all numbered thirty-nine, remained for the purpose of guarding the specie on board until the Carazo, which promised to return at once after landing the passengers at Graytown, should come back and take them and the specie thither. Four days later, the Carazo not having yet returned and the weather becoming somewhat threatening and the steamer seeming likely to break up soon, the specie, which was in three casks and weighed about 800 pounds, was removed to the island, about 6 miles distant with the aid of a fishing boat and a schooner. Nothing having been heard of the Carazo during several days following, the master and the remaining seven of the crew started for Greytown in a small two-masted sail boat taken from the ship, carrying the specie with them. They made the trip in a little more than a day, put the specie on the libelant's steamer Hindoo, a sister ship, notified the consignee at Greytown, and asked one-third the amount as salvage compensation. This being refused, the specie was taken to New York and the libel filed by the owners of the Hindoo and Aguan, and by the master and seamen who remained by the ship.

"Without considering the question of presumptive negligence of the master," says the finding, "in running his vessel upon a well known shoal in fine weather, the master is not entitled to salvage compensation, for the reason that the proofs do not show any such extraordinary circumstances, or any such service outside the line of his duty, as to entitle him to a salvage reward. In the disaster the master is the agent and representative of the cargo, as well as of the ship, as respects all matters connected with its safety and preservation, so far as preservation is possible. In cases of stranding it is his duty to provide for the safety of such of the cargo as can be saved. In arranging for the return of the steamer Carazo from Greytown to take the specie which she had refused to take on her first trip, the master was only fulfilling his legal duty. The arrangement was a simple and proper one upon which he had no right to rely. It did not apparently involve any danger and but small inconvenience. Why the Carazo did not return we are not told; the agent of the libelant company, who went to Greytown in her, and who verified the libel in this case, if he knew the reason, has not disclosed it. But that is not, perhaps, material. Though her failure to come back entailed much additional care and labor, it did not change the master's duty with respects to the specie. As respects the seamen the case is somewhat different. All hope of saving the ship or of continuing the voyage had been abandoned before the Carazo sailed away. The engagement of the sailors for the ship and the voyage was broken up.

Thirty-one of the crew were sent to Greytown, evidently discharged, and the seven who remained should be treated, I think, not as seamen remaining on wages but as any other persons would be treated who were secured by the master for the purpose of guarding and preserving so much of the cargo as was practicable, after the abandonment of the ship, until the Carazo returned. That seamen after their discharge may be allowed compensation as salvors, where the voyage is broken up, has been repeatedly adjudicated. The old sea laws, while emphasizing the duty of the seamen to stick by the ship, and to save as much as possible of ship or cargo by all reasonable exertions, provide also for extra compensation to seamen over and above their wages, though not discharged, when they have performed this duty. That the seaman who remain should receive some extra compensation under circumstances like the present seems to me not only equitable, and authorized by the maritime law but sustained by sound policy, as an incentive to faithful conduct. I do not find, however, that the actual service was arduous, and the sum of \$1,000 will, I think, be a fair and liberal compensation, for which a decree may be entered, with costs."

Judge Shipmen of Connecticut found occasion to say in a case recently heard by him: "Where a vessel at anchor in the night time can see the lights of an approaching vessel, there is no reason to suppose that her own lights, properly set and burning brightly, can not be seen; and hence her failure to display a torch before the approaching vessel collides with her is not such a fault as will entitle the colliding vessel, confessedly at fault, to a division of the damages."

Big Contracts for Lighting Plants.

The Fisher Electric Company has been awarded the contract for placing incandescent lighting plants on the Menominee fleet of steel boats, consisting of the Norman, German, Saxon, Briton, Grecian and Roman. These plants will be exact duplicates of those installed by the same company on the boats of the Mutual line. The boats are divided into five circuits and controlled by the automatic mechanism installed by the Fisher company. The boats will be equipped with new fixtures and the plants will be first class in every respect.

After an experience of one season with the lighting plants on the Mutual liners, Mr. L. C. Hanna, president of the Menominee Transportation Company, decided to award the contract for placing lighting plants on the above named steamers to the Fisher Electric Company without competition.

Parker & Millen of Detroit, were the first to accept the Duluth offer of 4½ cents for tonnage to take grain to Buffalo in the spring. They placed two steamers with consorts for two trips each at 4½ cents. The steamer John Oades and consort Parker constitute one of the pairs under engagement. The schooner Kate Winslow is loaded with rye at Green Bay on a 5½-cent rate for storage and spring delivery.

A Toledo Steamer Will Try Fuel Oil.

Special Correspondence to the MARINE REVIEW.

TOLEDO, O., Jan. 21.—An interesting experiment will be made this spring on the sand boat Laura D. Capt. I. D. Gillispie, has applied to the secretary of the treasury for permission to use crude oil as fuel on the steamer. Permission will undoubtedly be granted in this case, considering the business the Laura D is engaged in. The owners expect a saving of at least 50 per cent. over soft coal, as they claim that 130 gallons of crude oil is equal to one ton of coal. Crude oil can be purchased here for one cent a gallon. Economy of space is also important as this quantity of oil will occupy less than one half the space taken up by a ton of soft coal and its weight is less than half a ton. The Laura D has two Roberts' safety water tube boilers. In large stationary plants in this city and vicinity oil is being used extensively.

At a meeting the board of concilmen, Monday evening, a committee was appointed to go to Washington and appear before the river and harbor committee, with a view to securing a suitable appropriation for the dredging of the harbor. The committee is composed of Mayor Emmick, S. C. Schenk, W. T. Carrington, S. R. Callaway, D. B. Smith and E. D. Mitchell. The river needs dredging very badly.

Around the Lakes.

In an advertisement elsewhere in this issue Gen. Poe, Detroit, Mich., asks for proposals for furnishing twelve valve frames and fourteen valves for the 800-foot lock at St. Mary's Falls canal.

Capt. James Reid will try to release the schooner Minnehaha ashore near Detour. It is reported that he will receive about \$11,000 if the boat is released by April 1, but for every day of delay after that date a reduction will be made.

The annual meeting of the Wolf & Davidson Steamship Company occurred on the 16th inst. W. H. Wolf was elected president; David Vance vice president; F. R. Pingree secretary; John Saveland assistant secretary and Thomas Davidson treasurer.

William Murphy is building at the foot of Henry street, Buffalo, a wooden passenger steamer to cost about \$30,000. She will be 140 feet long, 30 feet beam and 10 feet hold and will have compound engines. James Conlon and Terrance Byrnes are interested in the boat, which will probably be sold when built.

John Keenan and D. J. Murphy have begun business on Main street, Cleveland, under the name of the Lake Erie Boiler Works. They will construct small boilers, tanks, etc. Both are mechanics of long experience. Mr. Keenan was with the Globe Iron Works Company of Cleveland, and Mr. Murphy with the Pittsburgh Locomotive Works.

Rieboldt, Wolter & Co. of Sheboygan have contracted to build for H. M. Van Ells & Co. of Milwaukee a fishing tug 65 feet over all, 14 feet beam and 6½ feet hold. She will have a 14x16 foot engine, and a boiler 5 feet 6 inches in diameter and 10 feet long, to carry 130 pounds of steam. Johnston & Co. of Ferrysburg, Mich., will build the boiler.

The Leatham & Smith Towing and Wrecking Company, of Sturgeon Bay, mentioned in the MARINE REVIEW last week, will utilize the steamer Thomas H. Smith for wrecking purposes. Her engine is to be placed amidship and other necessary changes made. The Smith measures 200 net tons and possess good power. Her draught is also suitable for the business.

Boiler Inspector M. F. Chalk of West Superior, has been offered \$1,000, all expenses and an insurance on his life for \$14,000 if he will undertake a submarine search for the Pewabic, in which Oliver Pelkey lost his life last fall. Besides this, if the vessel is found, Chalk would be given one-half the proceeds of the sale of the cargo, which, as it includes 555 tons of pure copper, it is believed would be over \$100,000. Mr. Chalk has been a professional diver ever since he was sixteen years of age, but is undecided as to whether to accept the proposal.

Congressman Lockwood of Buffalo has introduced a bill to amend the law which requires vessels on the lakes to carry guns to fire line carrying projectiles. The amendment proposes to abolish the law so far as it applies to the lakes. In speaking of this matter in Washington, Mr. Lockwood said: "I introduced the bill at the request of the Buffalo Lake Carriers' Association. From year to year, it has been necessary to adopt a joint resolution exempting the lake vessels from this law, and the history of the lake carrying trade proves that only one wreck has occurred on the lakes in twenty years wherein one of those guns could have been of any service. It is an extravagant and expensive requirement for which there is no warrant."

The Washington correspondent of the Buffalo Express says: "Senator Hoar is preparing to use the information obtained in his tour as chairman of the committee on trade relations with Canada to introduce and push a bill directing the secretary of war to inquire if any discrimination against grain for American ports going through the Welland canal is practiced and if such is found the secretary is authorized to retaliate by imposing similar tolls on grain for Canadian ports that goes through the St. Mary's and St. Clair Flats canals. Senator Hoar, being from New England, is quite open to conviction on this subject, for the principal complaint of discrimination comes from Ogdensburg, which receives grain for shipment over the Central Vermont railroad."

At the official test of the Kingston dry dock, constructed by the Canadian government, the main pumps were started and the water of the dock lowered at an average of a foot in four minutes, and in one hour and seventeen minutes from the start the engines were shut down, the dock being empty. The capacity of the dock with the water at its present level is about 2,000,

000 imperial gallons, so that the discharge during the test was in the neighborhood of 26,000 gallons per minute. The main pumps are placed in the engine pit, some thirteen feet below coping level, and the discharge below the lowest ice level. The auxiliary engine which opens and shuts the gates and operates the drainage pumps is a double high pressure, reversing engine. The auxiliary pump is an 8-inch centrifugal, placed 35 feet below the coping level and is run at 700 revolutions per minute by a vertical shaft. A large steam fire pump is also placed in the engine room, guaranteeing ample security from fire to vessels under repair. Provision is made for an overhead traveling crane to be used in overhauling the machinery.

How to Hang a Man at Sea.

"I don't know exactly how long the reading took, for I was busy taking my last look at my shipmates and the familiar things about decks,—and wondering how the Albany's crew was stationed to see the show, when the master-at-arms touched me on the shoulder and led me to the Jacob's ladder in the wake of the starboard fore-rigging. This I was told to mount. I remarked I couldn't with my hands seized behind my back. That made a break in the performance while 'the first luff' had to come for'ard and have my arms set free. Then I mounted the Jacob's ladder, stepped over the hammock nettings and found myself on a staging built outside the ship, even with the rail and nearly under, but a little abaft the fore-yard. From the end of the fore-yard hung a block and through it was rove a piece of two-inch manilla stuff, the out-board end of which was led down to the stage and had a hangman's knot in it. The part of the rope which led inboard was rove through a block in the slings of the yard, and attached to it was a stout netting made of inch hemp stuff, and containing twelve thirty-two pound shot. On the out-board side of the inboard block the manilla rope (on one end of which I was to be and on the other end of which already was the netting with the shot) was made fast to the yard by a lanyard in which was a slippery bend on one end, and the other end was led down a trap door in the stage and rigged in such a way that when the gun that was to cut the trap door seizing was fired, the fall of the trap door would pull the slippery-bend loose, the netting with the three hundred and eighty-four pounds in it would come down by the run, while I, with my weight of one hundred and sixty pounds, would go out and up to the yard-arm with the same speed.

"On the stage was no person but the master-at-arms, the chaplain and me. The master-at-arms placed me in the middle of the stage on the trap-door, fixed the hangman's knot under my right ear, seized my arms behind me again and tied my ankles together, and pulled the cap down over my face. All the time he was paying these little attentions he took mighty fine care not to set foot on the trap-door, tho' he had no rope about his neck. But he knew there was about ten fathoms of water under the old frigate's keel, with plenty of tiger sharks cruising 'round seeking what they might scoff up. Then the chaplain made a prayer and went down off the stage on deck and walked aft. Then the master-at-arms went away, and there I stood all alone with no sound in my ears but the rush of the tide along the frigate's side underneath me. They were waiting for the orderly at the cabin door to report it 12 o'clock, and when the bell struck it was to be the signal of the gunner to fire the gun which was to cut the trap-door seizing and send me aloft like a topmast-stunsail. How I listened for that orderly to walk up to 'the first luff,' who was the officer of the deck on that occasion, of course, and say, 'it's 12 o'clock, sir; no one can imagine; and when I heard him stepping from the cabin door to the forward part of the quarter-deck, where I knew 'the old man' and 'the first luff' were standing, I stiffened myself for the swing. 'It's 12 o'clock, sir,' said the orderly, and I remember wondering whether they would swing me at the first tap of the bell or wait until the last one had sounded. While I was wondering about that, I heard quick steps coming along the starboard side of the spar-deck, mount the Jacob's ladder, and in less time than it takes me to tell it, 'the first luff' was reading my pardon."—Foretop Captain's Yarn.—The Rudder.

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- 88—FOR SALE—Steam barge, A2 rating, and of 18,000 bushels grain, or 375,000 feet of lumber capacity. Will sell half or entire boat.
- 89—FOR SALE—Cheap, two 18x20 marine engines complete with out-board shafts, wheels, driving bearings, stern bearings, steam pipes and oil cups, all in good condition.
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- 91—FOR SALE—Lumber schooner, B1 and carries 280 M.
- 92—FOR SALE CHEAP—Small ferry steamer.
- 93—WANTED—To trade, 2 or three fishing tugs for steam barge that will carry 200,000 to 400,000 lumber.
- 94—One-half interest of the barge Montgomery for sale at a sacrifice. Must be sold within ten days.
- 95—WANTED—Good fish tug.
- 96—FOR SALE—Steel steam yacht Straightaway, 90 ft. over all, engine 9x18.
- 97—FOR SALE—Harbor tug, engine 18 x 20.
- 98—FOR SALE—Steam arge, 275 M. lumber carrier.
- 99—FOR SALE—Two 450 M. lumber schooners.
- 100—FOR SALE—70-foot fish tug.
- 101—FOR SALE—Small steam barge for \$4,000.
- 102—WANTED—For cash, schooner of from 500 to 700 tons capacity; B1 or lower class.

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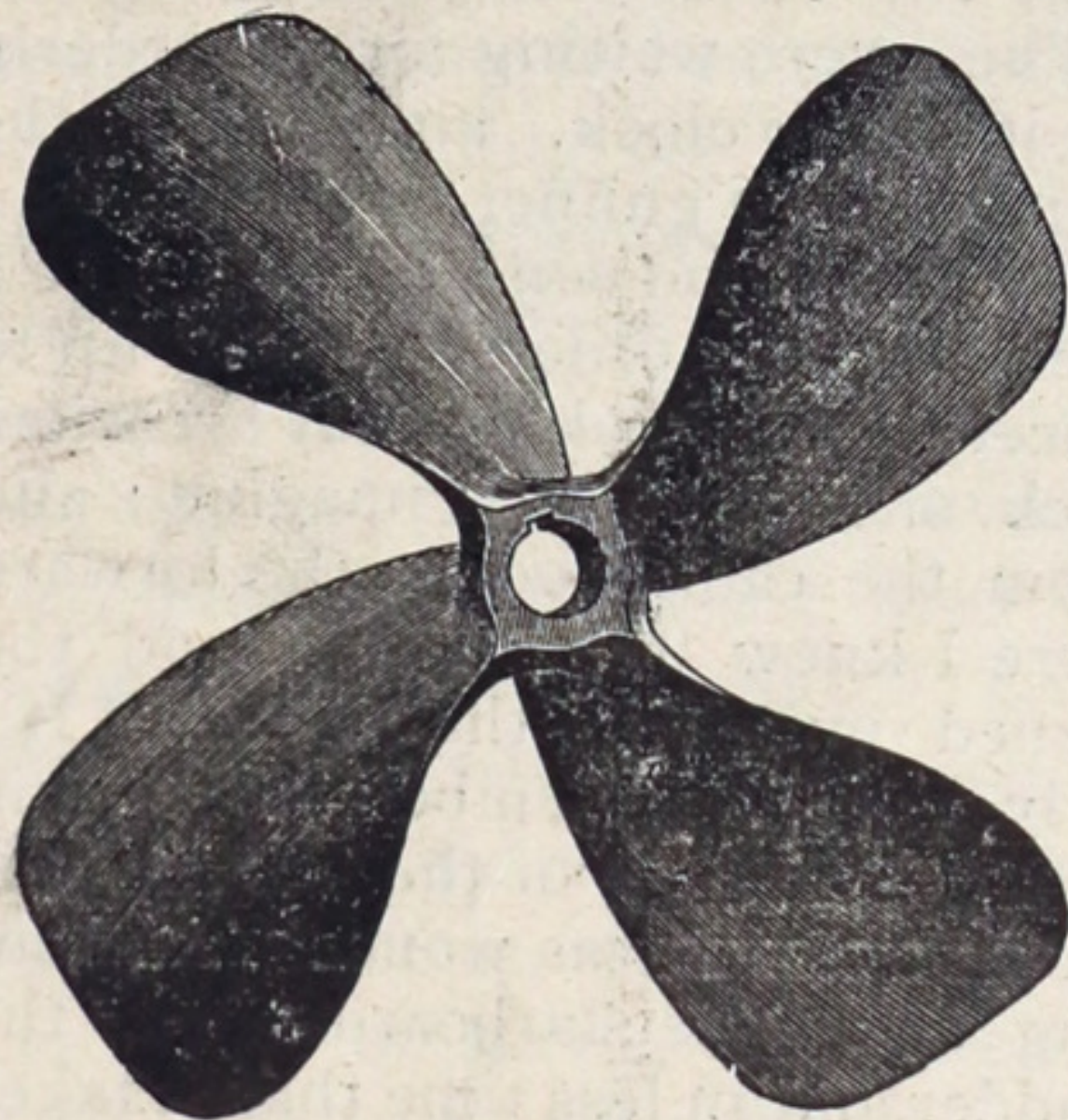
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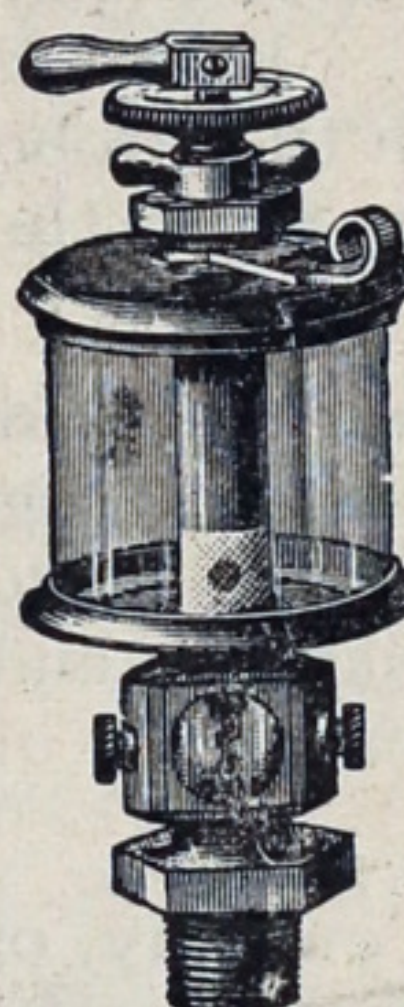
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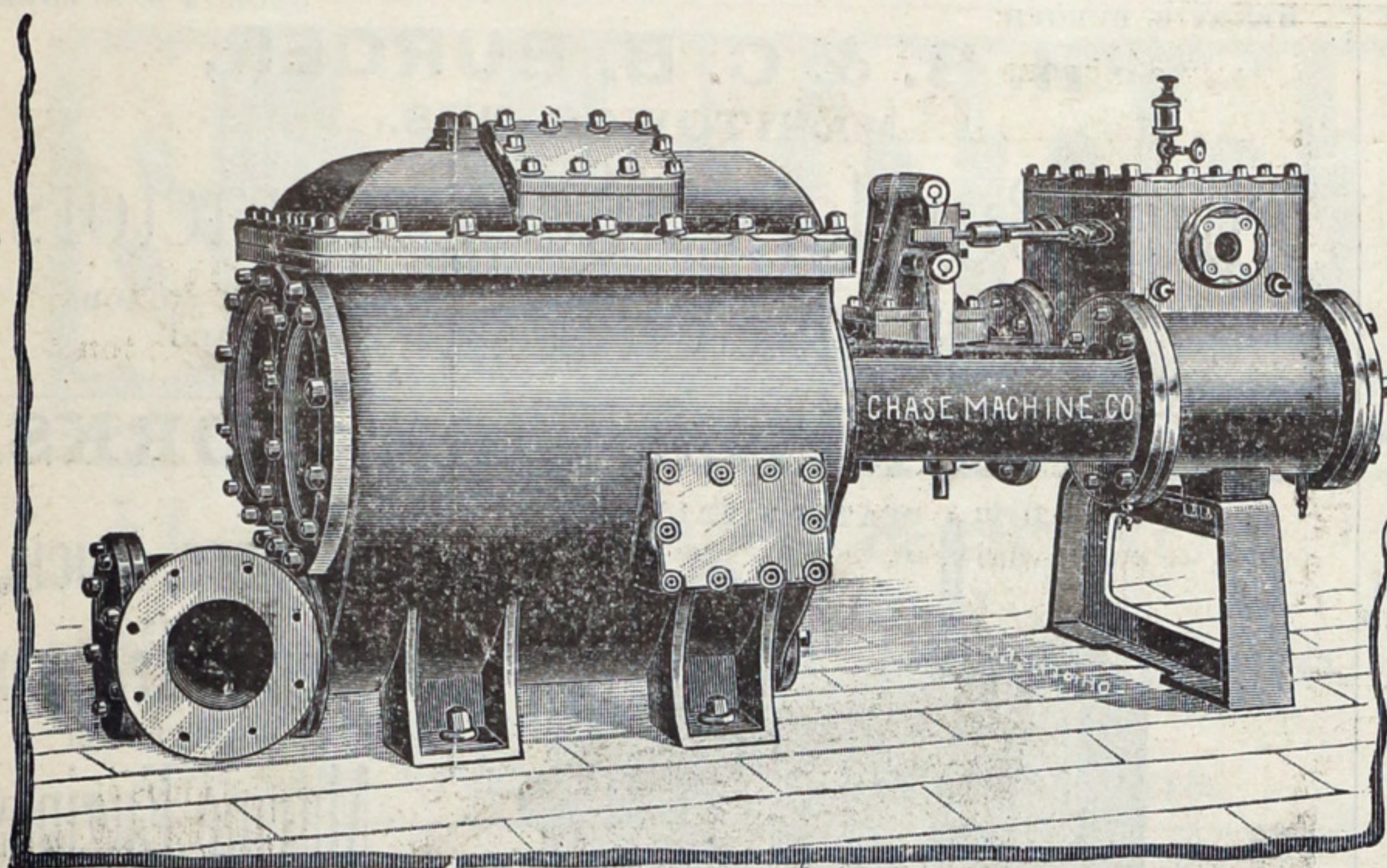
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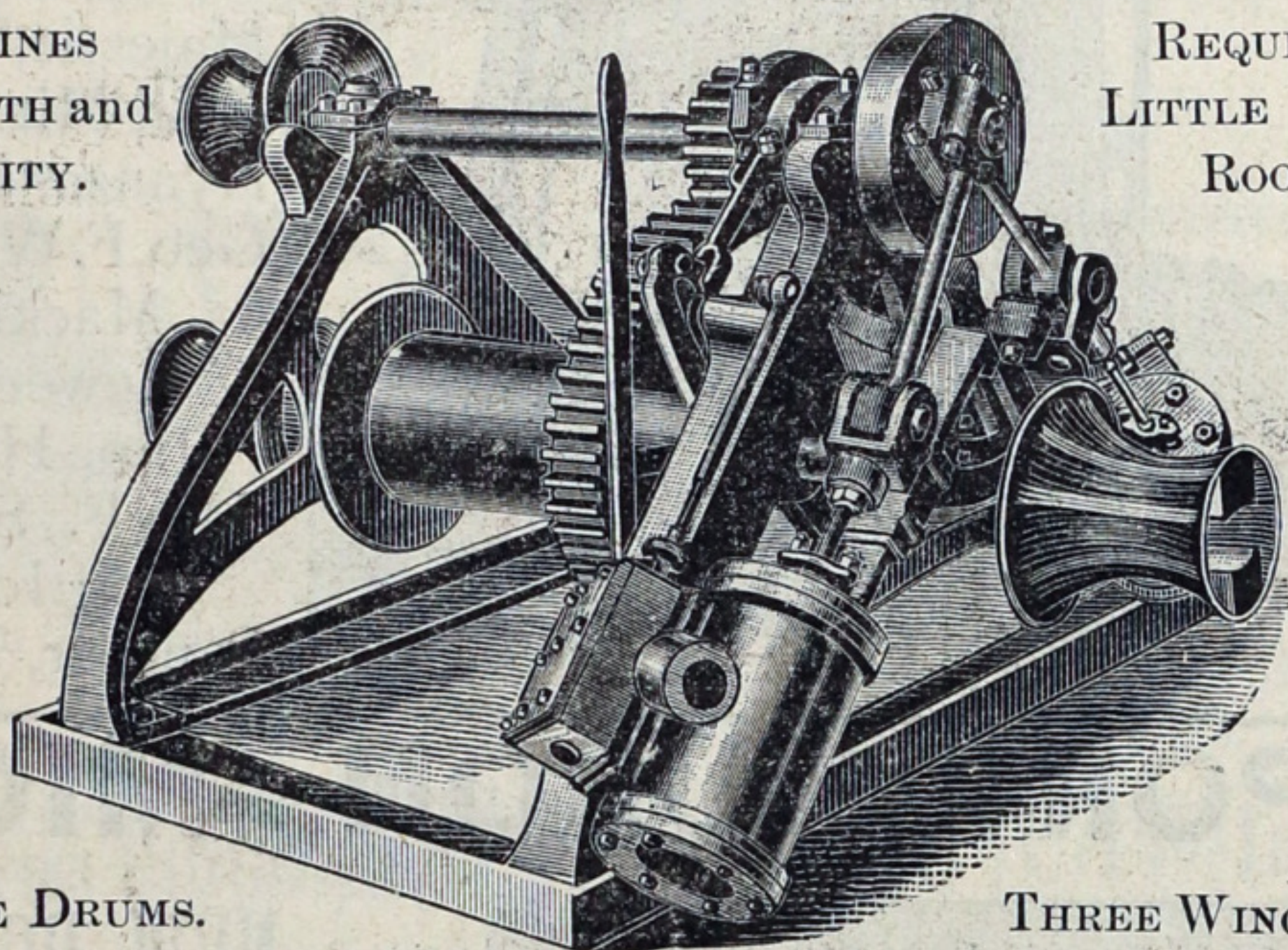
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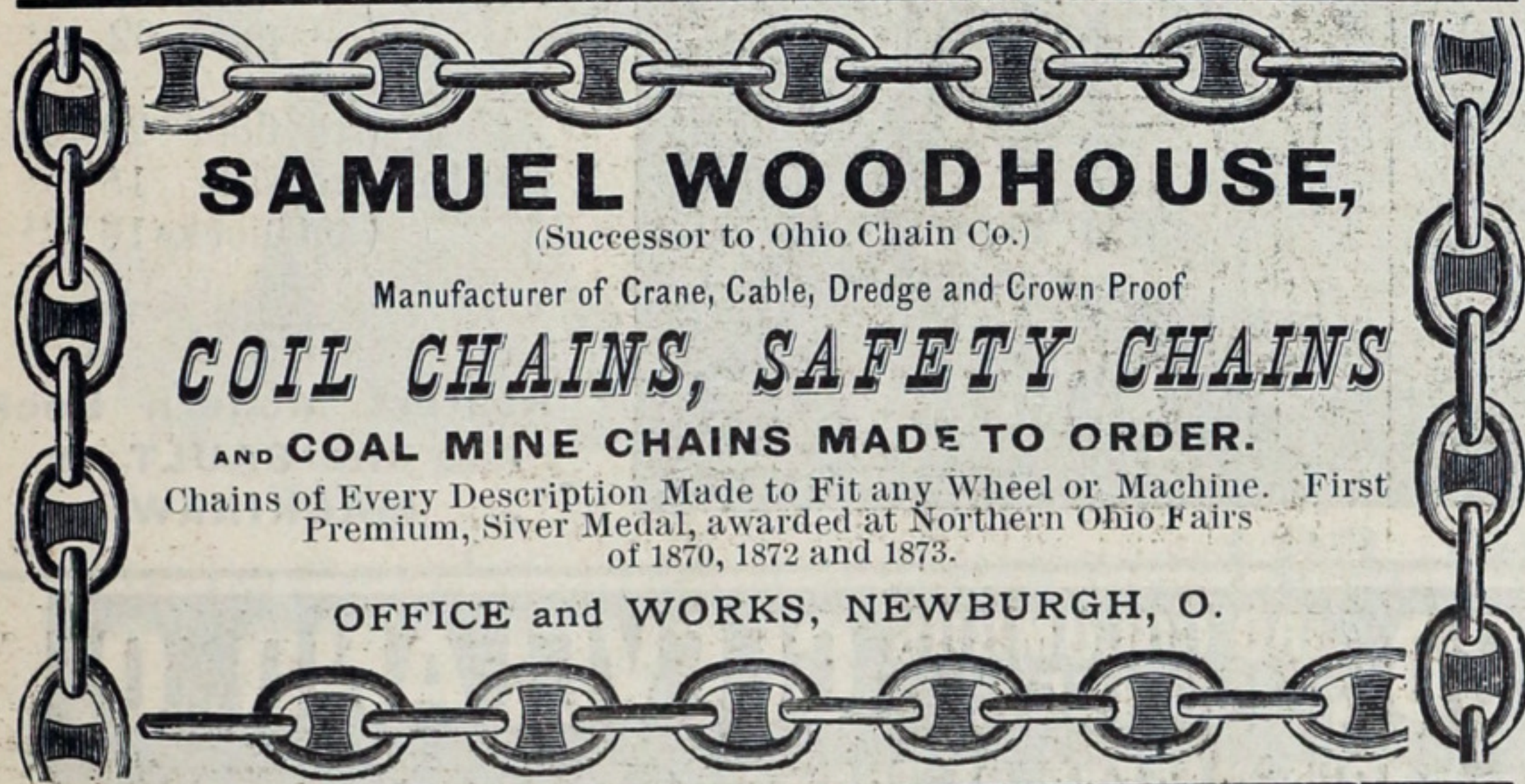
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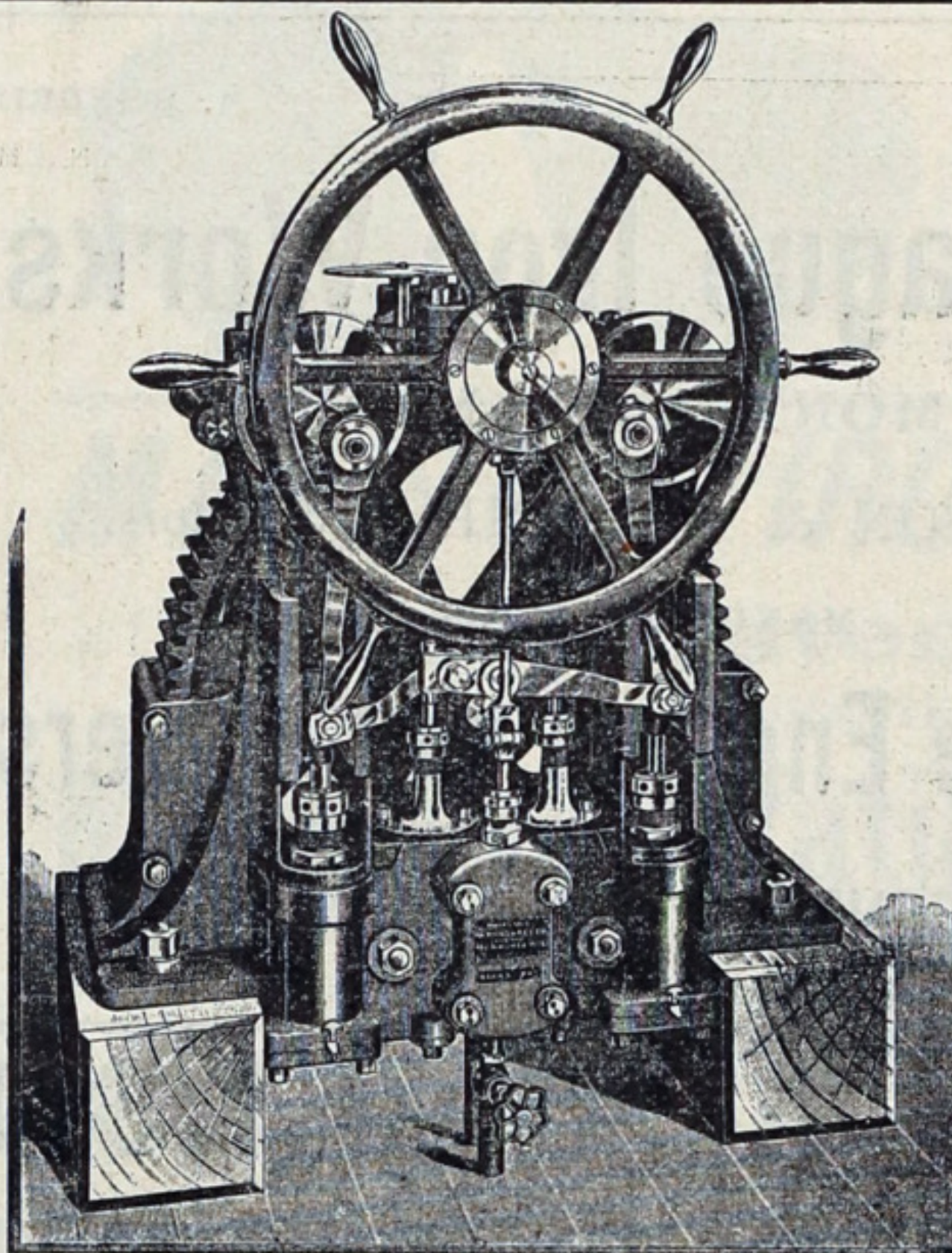
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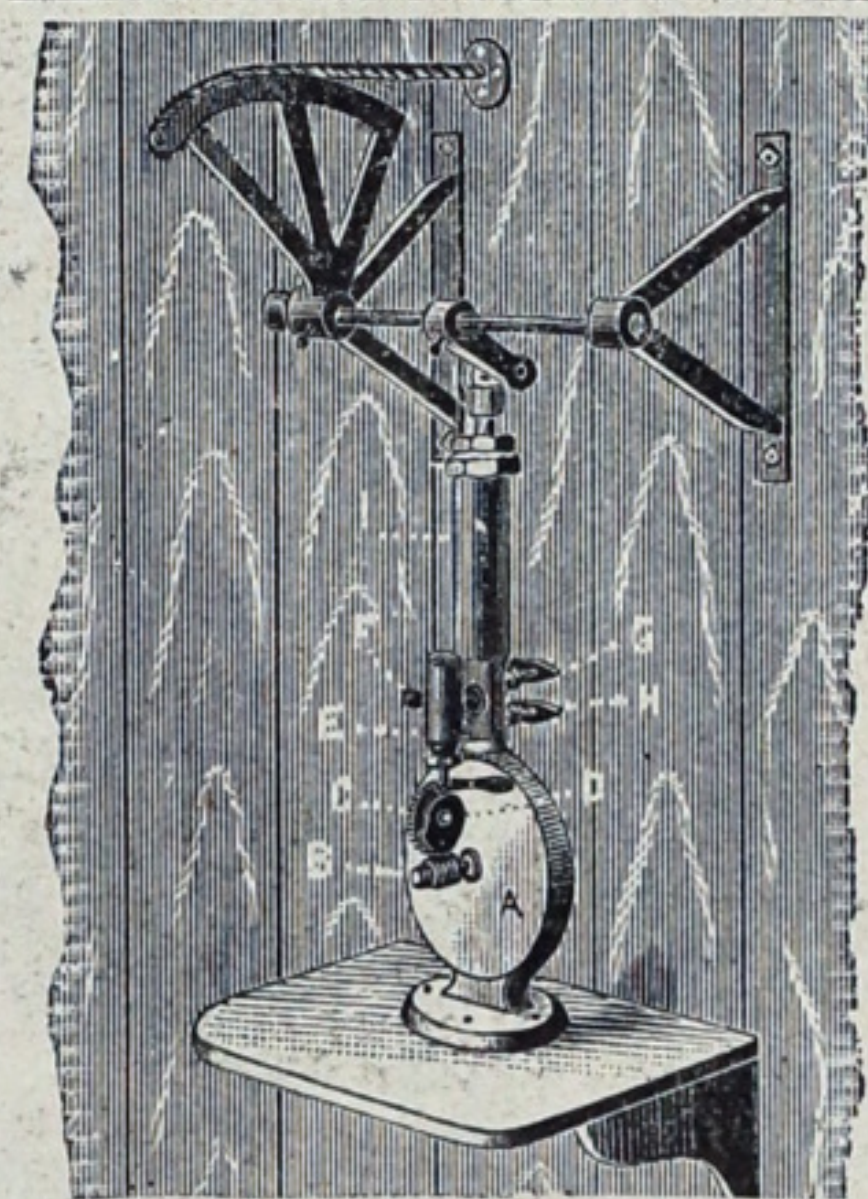
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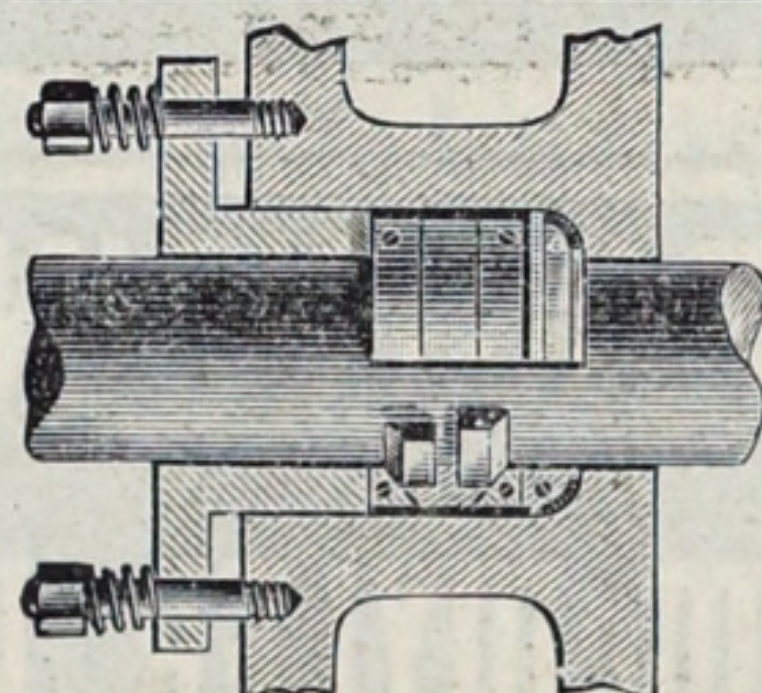
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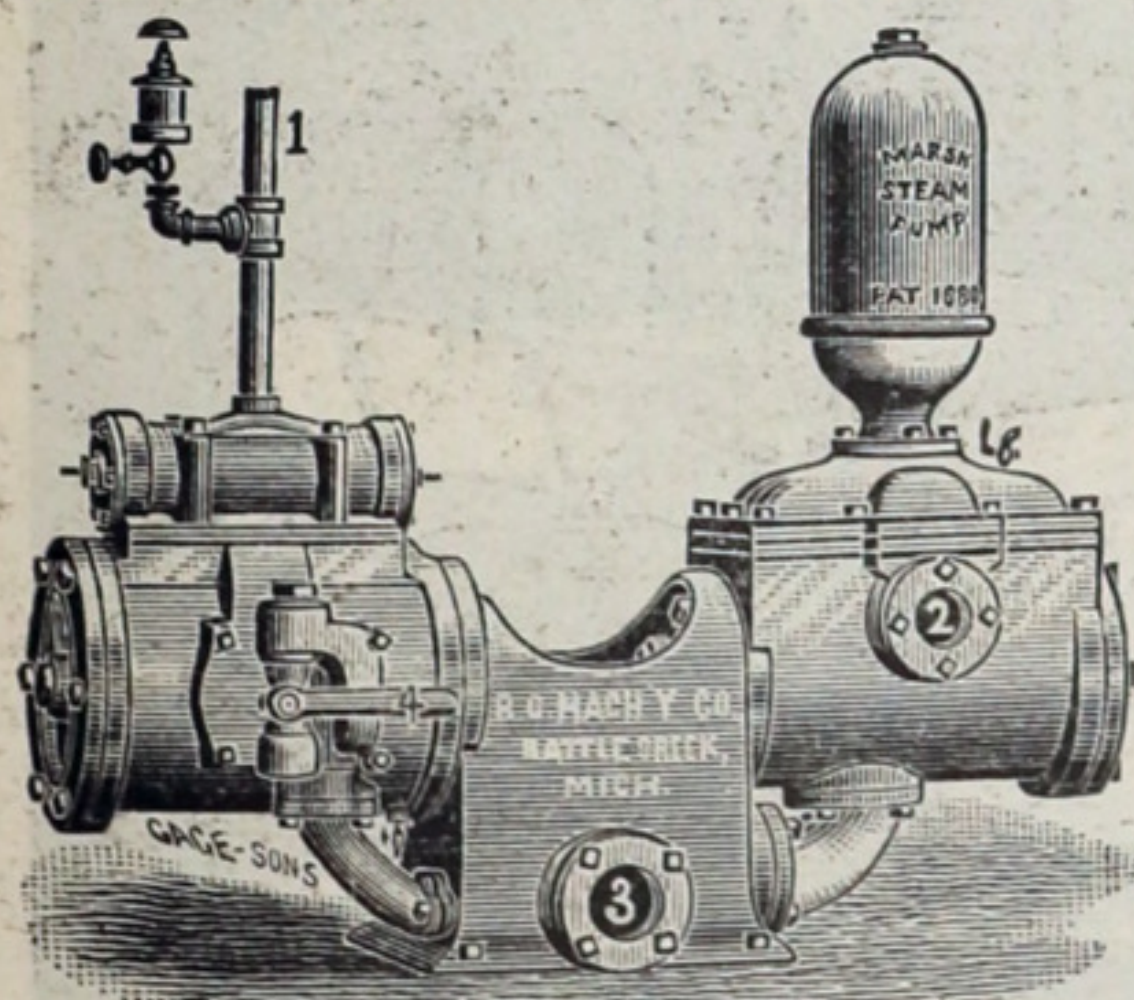
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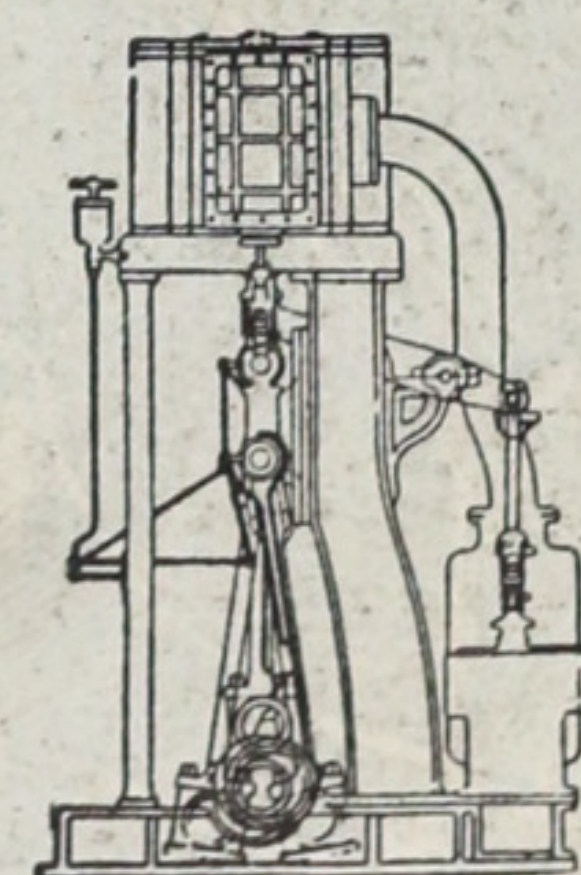


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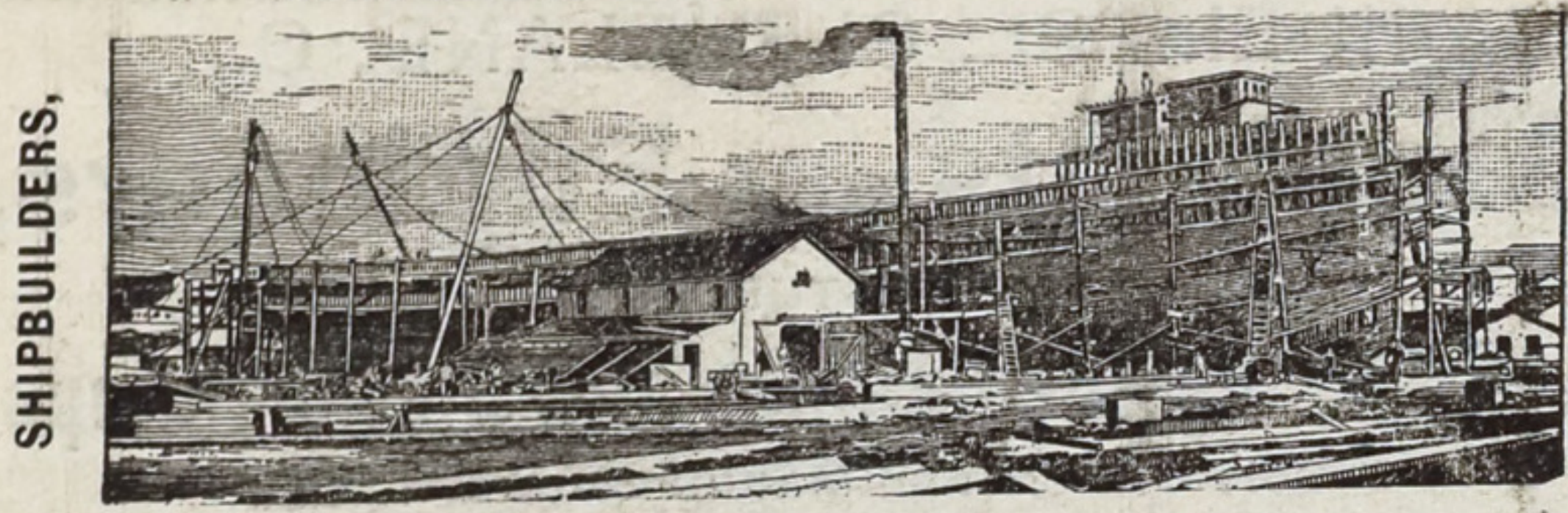
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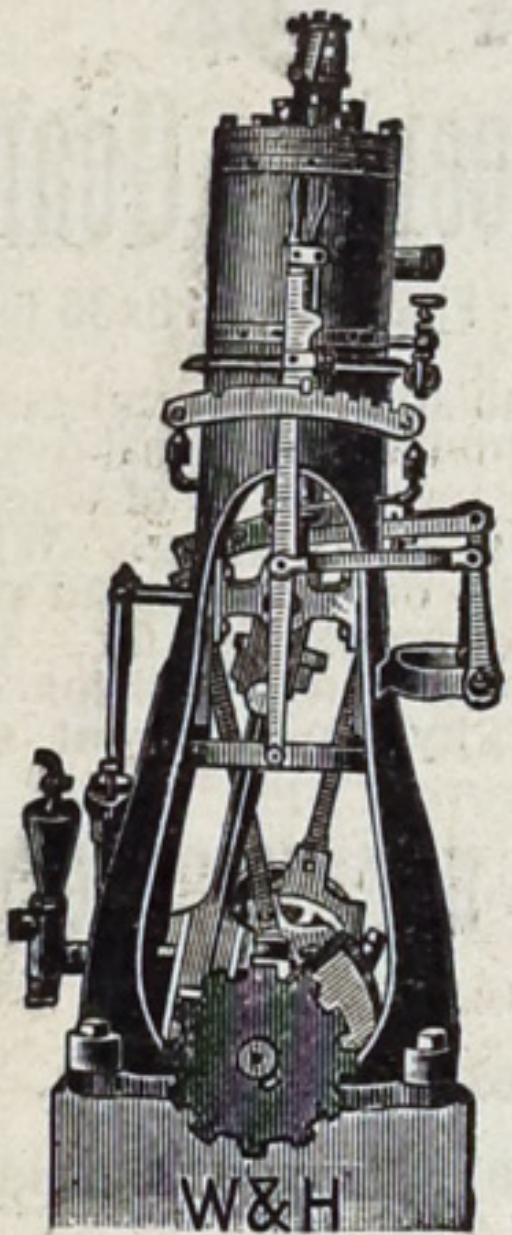
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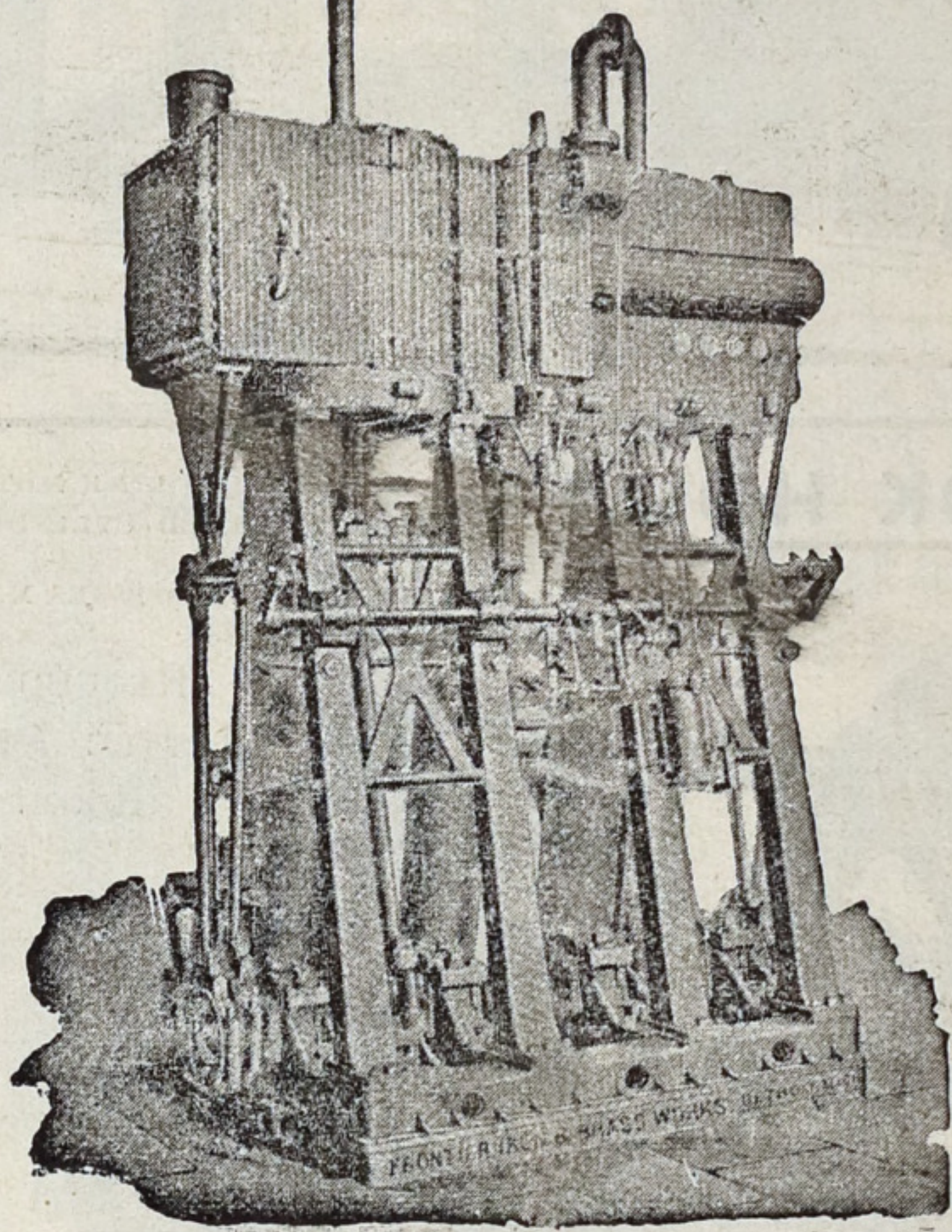
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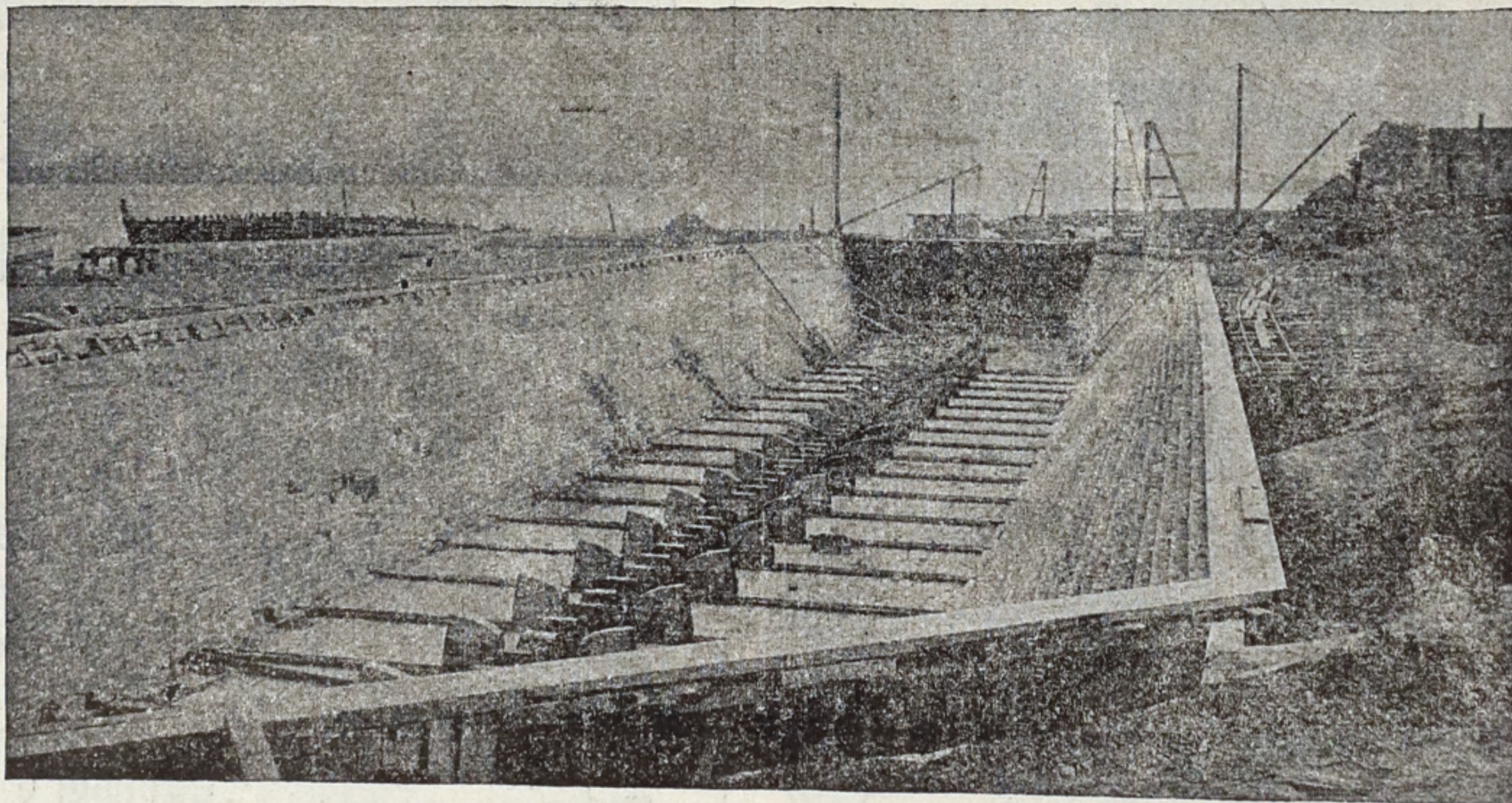
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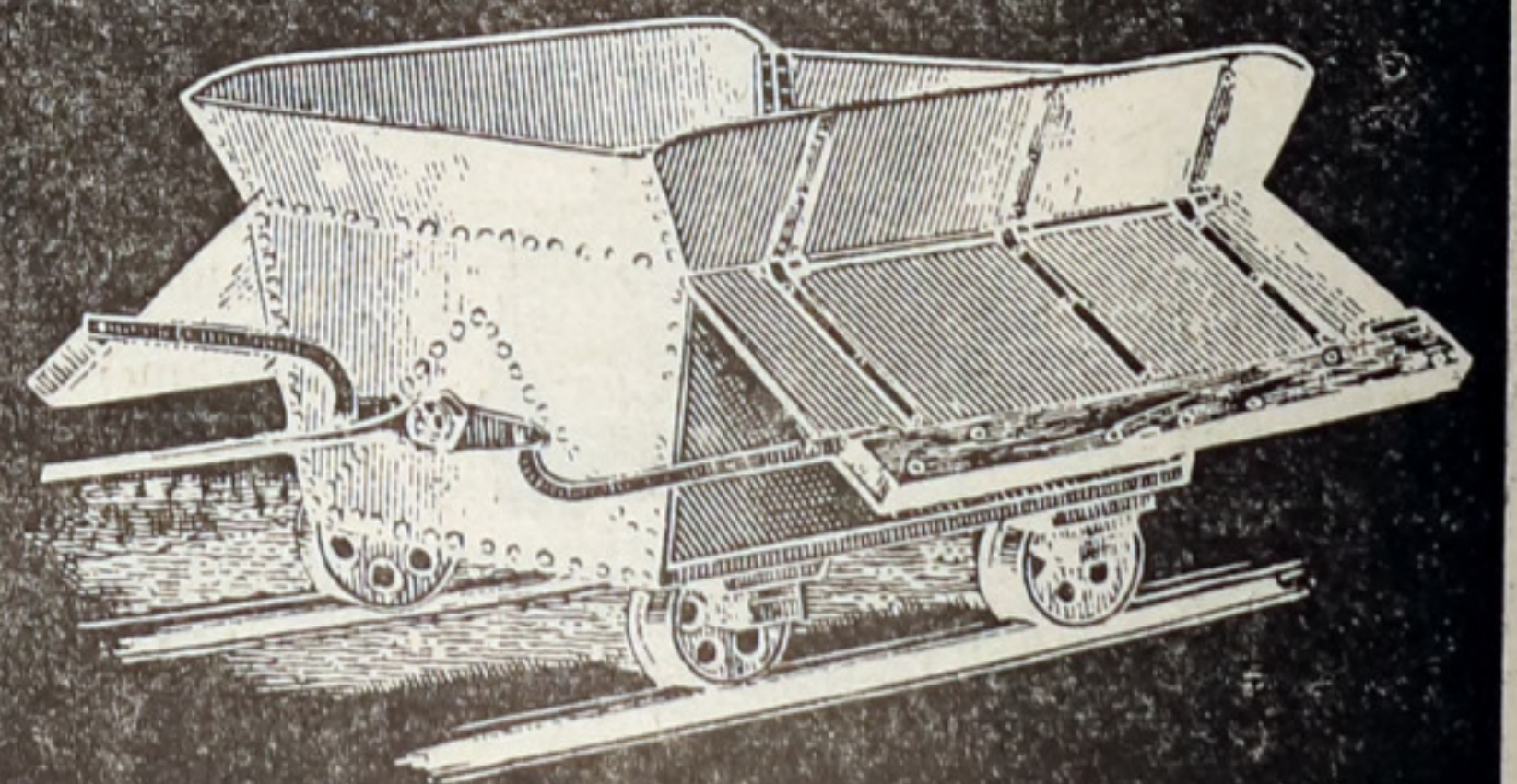
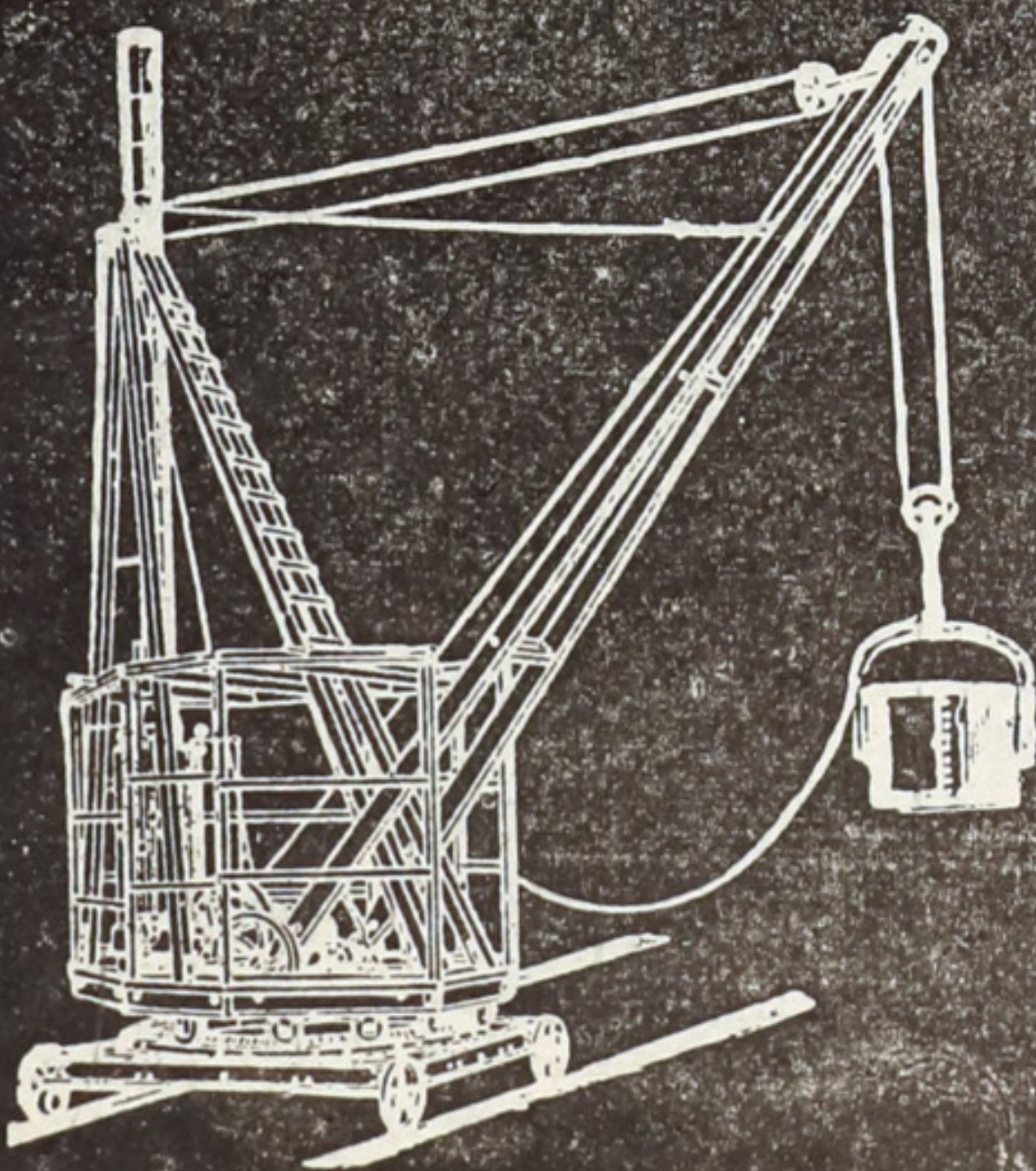
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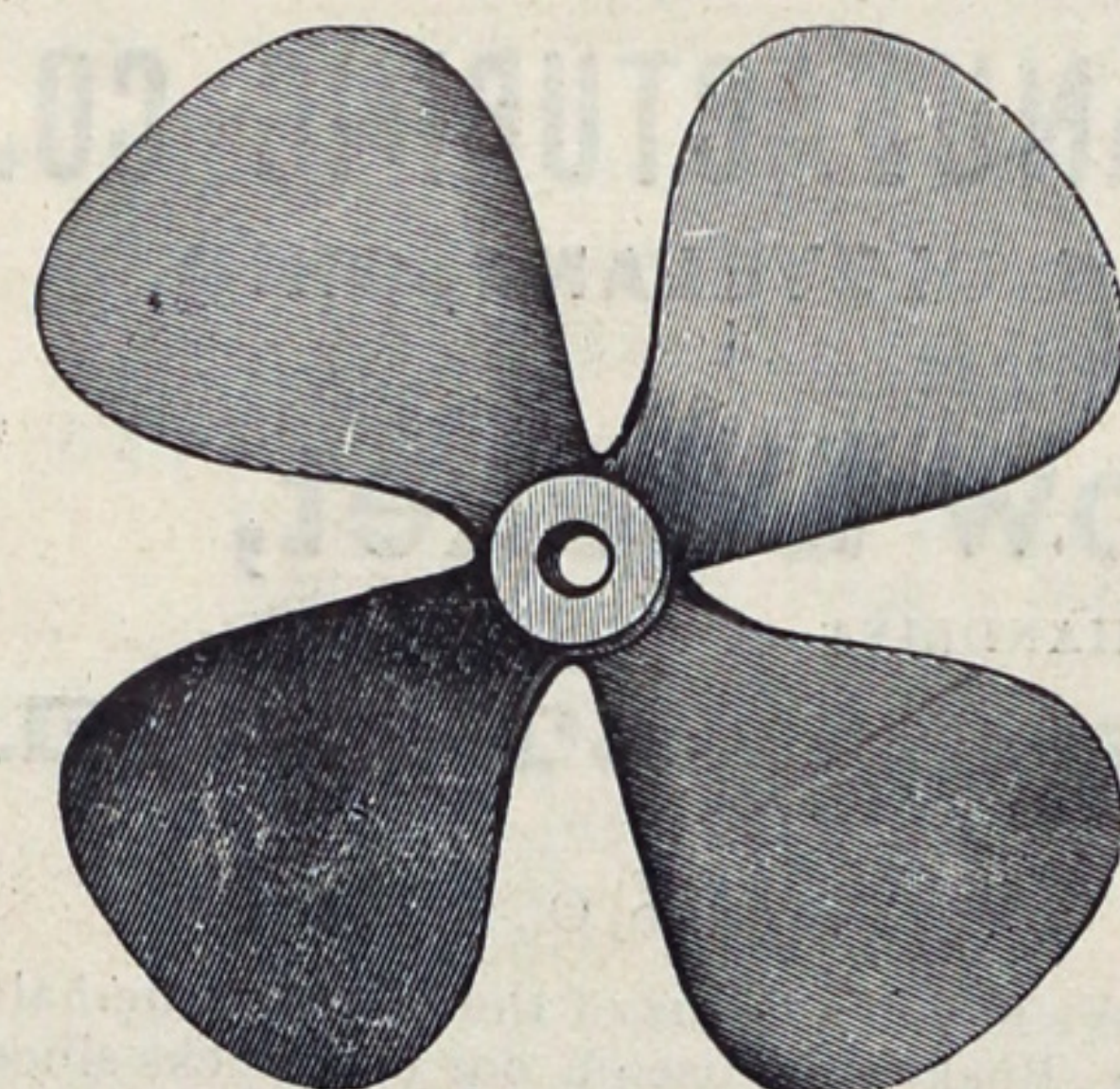
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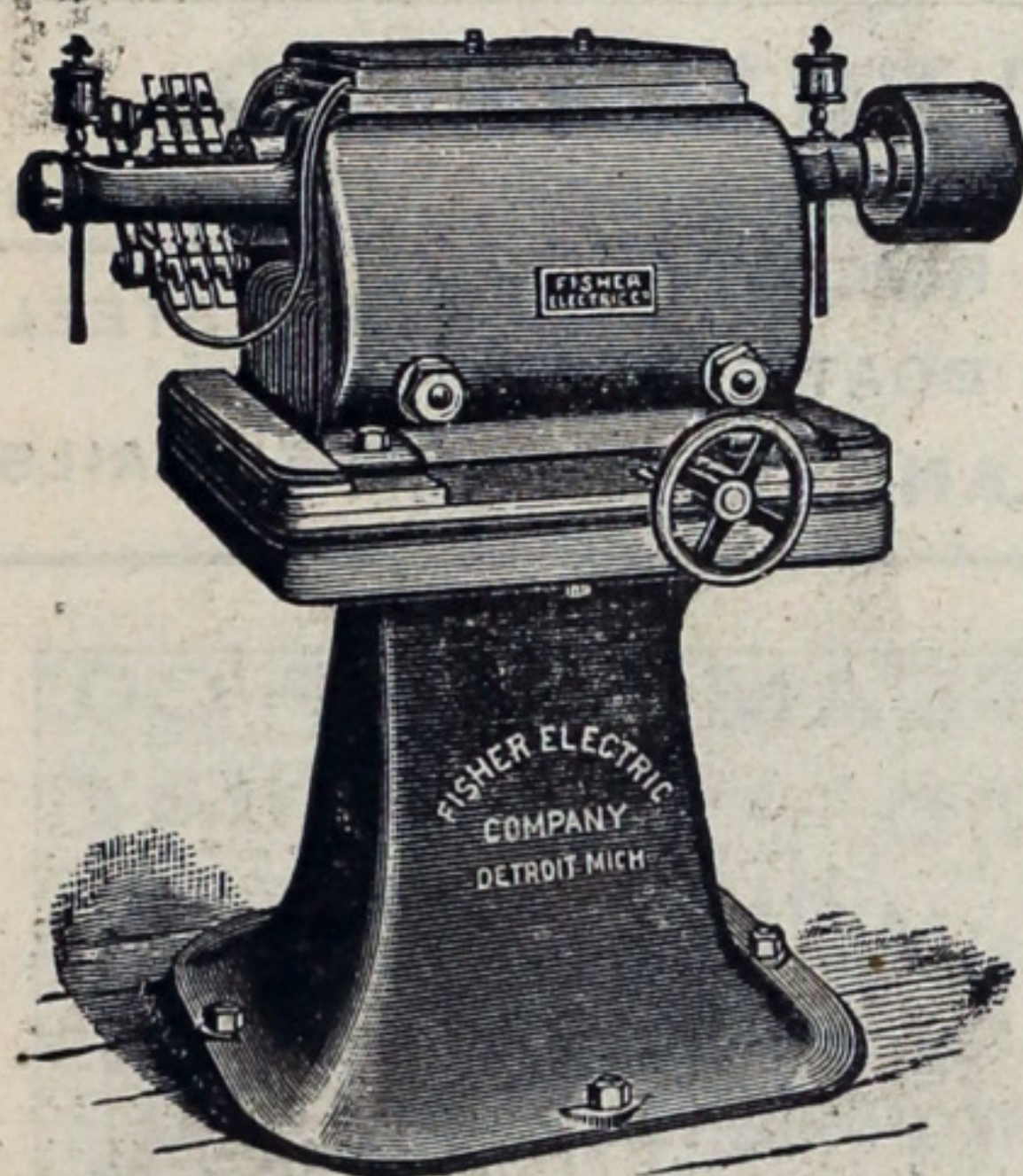
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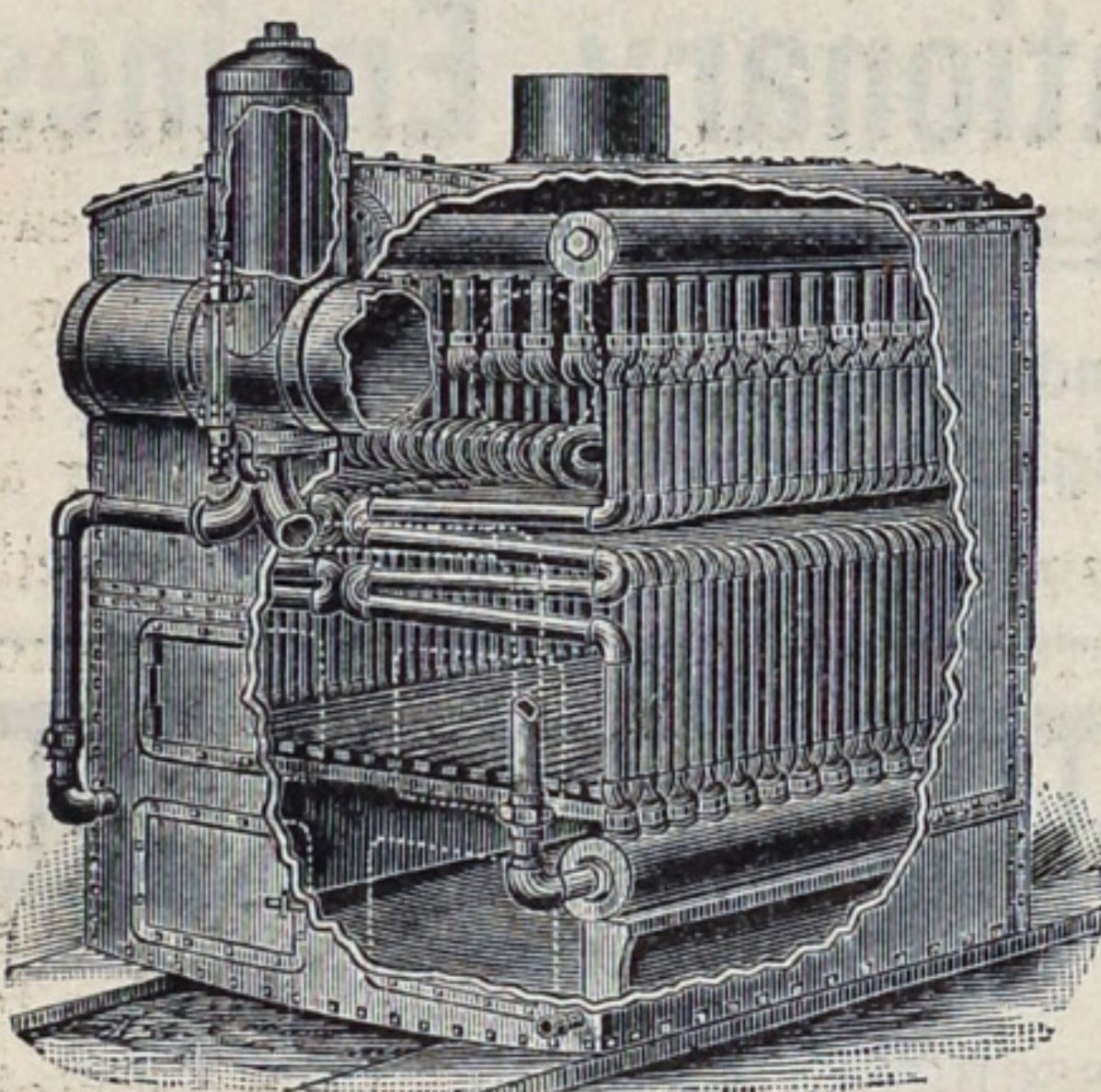
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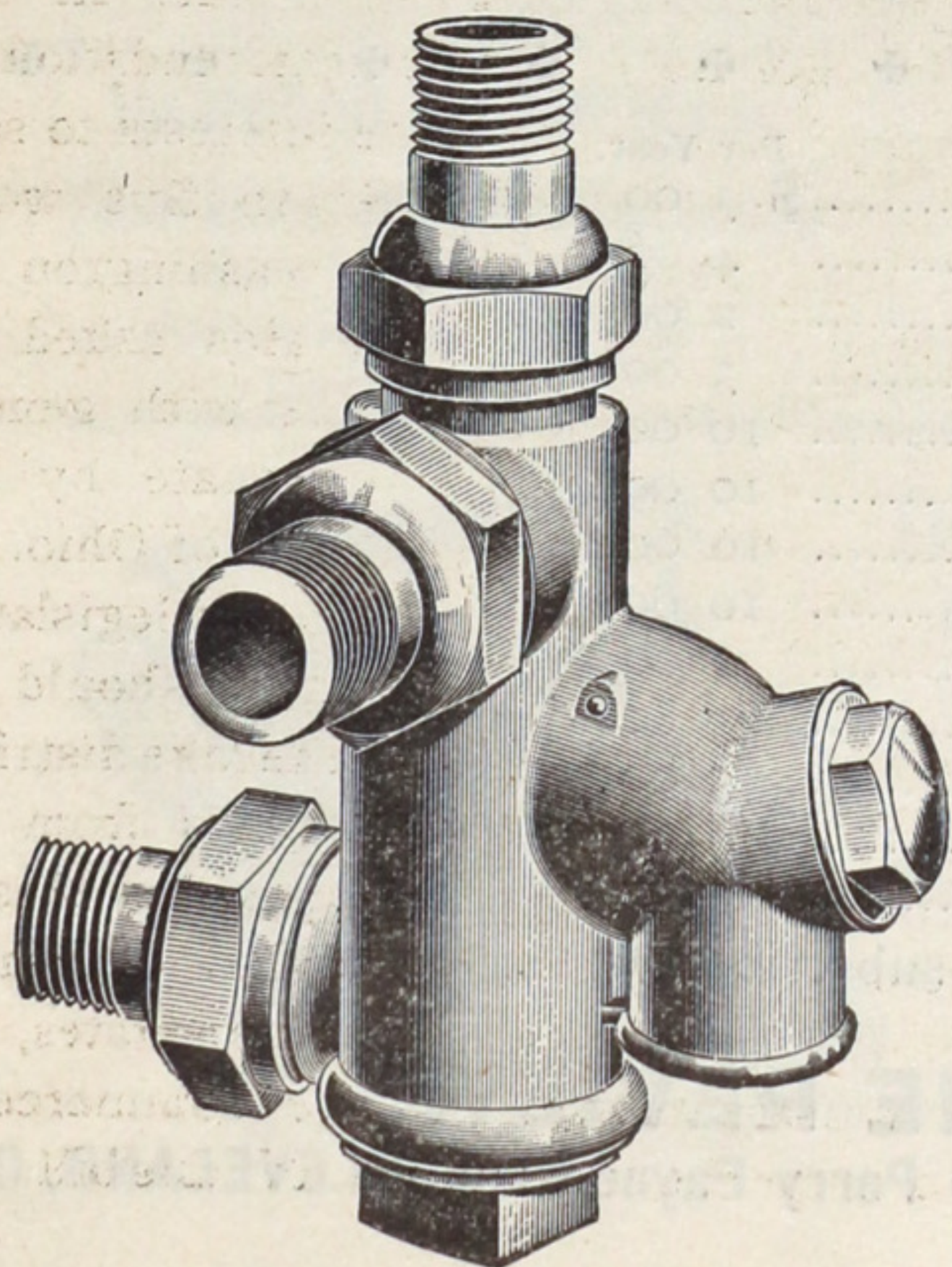
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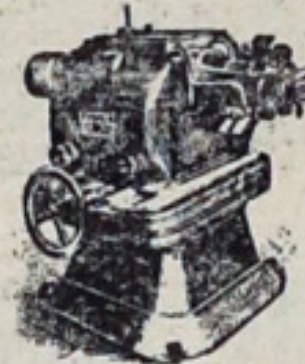
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